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OF AGRI

THE MARYLAND FARMER:

A
MONTHLY MAGAZINE

DEVOTED TO

Agriculture, Horticulture, Rural Economy & Mechanic Arts.

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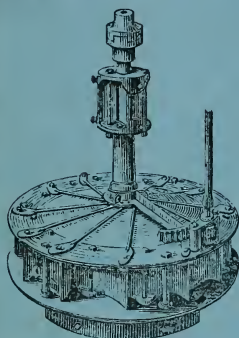
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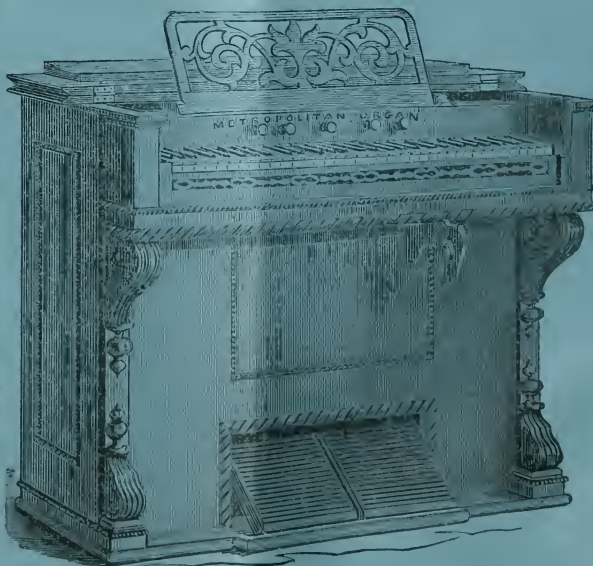
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THE

MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, Rural Economy & Mechanic Arts.

Vol. 7.

BALTIMORE, January, 1870.

No. 1.

THE NEW YEAR---SALUTATORY.

In by-gone days it was a time honored custom for many merchants, at the beginning of a new year, to open a new set of books, by inscribing on the title page the reverent words, "Laus Deo." They suggested, in spite of past cares and sorrows and tribulations, a thankfulness for blessings vouchsafed, for the life that had been spared to them—the health they had maintained, or the sickness from which they had recovered. They also indicated the hopefulness with which men, who are not utterly cast down, look forward to better fortune in the future. Even to us in the evil days upon which we have fallen, with the memory of dear friends lost to us and of high hopes rudely shattered, the old prayer of "Laus Deo"—praise be to God—may be not without its meaning and its consolation. The turbulence and excitement of the past eight years will gradually calm down, and although so many have lost, much yet much may still be given to us in other ways, for which we ought to be thankful. It is an old proverb, but a true one, that "it must be a long lane which has no turning," and when the turning point has at last been reached, the better prospect which may then develop itself, will offer at least some compensation for the dreariness of the road by which it was reached. It may be a long time before things are righted, but the country grows. In spite of a taxation heavier than that which bears upon any other nation, in spite too of changes in the structure of our government, the country grows, population is increasing, new lands are being broken up from wilderness, and old lands are being renovated. The scarcity of trustworthy labor is likewise being met by improvements in labor-saving machinery, and by sterner habits of industry and economy. If we are "ringing down the grooves of change," that change may not be wholly for evil, and may eventually be productive of a greater measure of good. But whatever happens in the future our duty is clear. It is to steadfastly pursue the right, so far as our judgment extends, and to leave the result to Providence.

The New Year may not open quite so propitious-

ly as many of us would wish; for taxes are high and breadstuffs low, but the South is rallying from the extreme depression into which it had fallen, labor is less disorganized than it was, and while our merchants are suffering grievously from the stagnation of business and an uncertain money market, the farmers of the Middle States and the planters of the South are on the one hand making no losses, and on the other reaping rich profits.

Come then what may there is still open to men of stout hearts and willing hands a fair field for enterprise, and in the chances and changes which occur at short intervals in this age of progress, events are likely to transpire that may bring us back to what was good in the old ways, and render innocuous much that is bad in the new. And with the earnest that such will be the case, we bid our patrons a happy New Year, and ask their good aid in extending the circulation of the *Maryland Farmer*.

Removing Stumps of Trees.

There is nothing annoys a farmer so much as having stumps in his cultivated fields. They are not only a loss in the crops from the surface of the ground which perforce must be allowed them, but there is frequent breaking of harness and bending of coulters, &c., by coming in contact with the roots. There have been several machines invented and patented to remove stumps easily and cheaply, but so far as we have observed their operations, they have not performed either easily or cheaply. Indeed, we thought they were no cheaper than by manual labor, with the disadvantage of having the machine, men and horses upon the premises.

A very good plan is, after digging around and under the stump, cutting off all the roots that can be got at, to attach a chain around the stump, pass it over a frame like the letter A reversed, only allowing the top pieces to overlay six inches, attach a good pair of oxen to the chain, and the largest stumps may be drawn out. We have seen a pair of oxen, which had become familiar with this heavy work, go at it with a run by being merely spoken to, and throw their whole weight upon the chain. They seldom did it in vain. This is better than any patented stump-puller coming under our notice.

—*Germantown Telegraph*.

Our Agricultural Calendar.

Farm Work for January.

All the work of the field is now suspended, and whatever is done must be done either under sheltering sheds or within doors. It is true, that under favorable circumstances, wood cutters may still pursue their work, but generally the frost in the wood of the trees will render it difficult. There are, however, many things that may be done which will facilitate operations in the spring. Even the long evenings of inclement days may be employed to attain this end.

The plans for the next season's cropping may be revised and corrected, if that should be found necessary. An account of stock may be taken to ascertain the profits or losses of the year, and where a liberal outlay may prove of benefit, and where there are leakages which require to be stopped. Indeed there is nothing more essential to the prudent farmer than a thorough examination of his past operations, with a view to the increase of his future profits. Good reading, reading that will be useful to him in the cultivation of his crops, or improve his own mind as well as that of his family, may also obtain a share of his attention. There are times when a single suggestion made by an agricultural journal, and falling upon a thoughtful mind will—in its application to the soil, or to the best mode of manuring or renovating it, or in the matter of economy of labor—bear precious fruits. Year by year we are becoming better versed in the science of farming.—Year by year the experiments of able analytical chemists, the ingenuity of mechanical inventors, and the well applied skill of our best farmers are developing new ideas in regard to the cultivation of soils and their special adaptation to the growth of certain crops. There is not, indeed, any farmer who does not know the difference between the treatment of light sands and stiff clays, but much is yet to be learned by many of these in respect to the most judicious method of increasing the texture of the former and ameliorating the heaviness of the latter. These are matters which may well form a part of the studies of winter days, and to those who need such information the commencement of a new year offers a favorable opportunity. The work for the month is as follows:

Threshing Grain.

Large quantities of grain have been held back at the West in consequence of the low prices now ruling and the high cost of transportation. In the Middle States, the market price, though also comparatively low, is nevertheless more favorable to the

seller. Doubtless with us much of the grain of last season's crops has been threshed and marketed.—Where this has not been done the winter months may be usefully employed in completing the threshing, and getting the wheat ready to take advantage of any rise in the market price before the spring opens, when in all probability a large portion of the wheat now held back at the West, will be hurried forward, perhaps, too, upon a falling market, as there are symptoms of financial trouble in the commercial world, owing to the enormous shrinkage in values which has recently taken place.

Surface Drains.

Examine at short intervals the condition of the surface drains that have been made to carry off the surplus water, which would otherwise injure the growing crops—and remove all obstructions.

Firewood.

No man who cares for the comfort of his family will fail to provide an ample supply of well seasoned firewood for the uses of the household, whenever wood constitutes the fuel employed. We presume in most instances, that this has been done, but where the supply falls short no time is to be lost in getting out sufficient, not only to complete the quantity required for the winter consumption, but also to store away for subsequent use.

Fencing.

See that the fences are in perfect condition. The old worm fence is a waste of timber, and the time is now approaching when our forests must be spared as much as possible. The heavy floods that have proved so destructive of late years have been caused by the reckless manner in which we have cut down our forests. But fencing stuff must always be in request, and its careful use is therefore most desirable. Whenever new fences are to be made the extra cost of constructing them is compensated by the better security they afford, the smaller quantity of timber they take, and the longer period they will last. If the season admits of it, go to work and get out roughly in the woods the fencing stuff that may be wanted, and have it hauled to the barn, or under cover, where the rails can be pointed and the posts hewed and morticed as opportunity may offer.

Store Hogs.

Continue to feed these carefully and regularly.—See that they are well housed, and that their pens are well supplied with rough material to work up into manure and that their sleeping apartments are kept warm and dry. To correct the acidity to which hogs are prone, and to strengthen their digestive powers, give them occasional supplies of charcoal and rotten wood.

Sheep.

For the winter management of sheep we refer to the *Farmer* of last month.

Materials for Manure.

We continue to urge the collection of materials for manure. All sorts of vegetable and animal matter; bones, wood ashes, and soap-suds are readily converted by admixture with the manure of the barn-yard, and by fermentation into a valuable fertilizer. The secret of economical farming is to save the expense of bought manures by making them at home.

Gates.

The ease with which gates can be made, and the small cost of the material of which they are constructed, ought to render their use universal. Bars are at best slovenly things. They are never safe, for if a single bar is slipped and left open, there is always danger of trespass and of damage to the growing crops. The time wasted in putting up and pulling down bars is also a serious matter, especially when work presses and entrance and egress to the fields, where bars are used, are frequent.

Fowls.

At this season of the year fowls require to be comfortably housed. The little care and attention which is thus bestowed upon them is amply returned—warm shelter promotes their laying early in the spring, and consequently those delicacies, spring chickens, come in early also. The floors of the hen house should be frequently swept and freshly sanded. The fowls should have occasional messes of fresh meat, minced fine, and have constant access to fresh water.

Garden Work for January.

We have no suggestions to offer in respect to garden work in the open air, during this month, for the good and sufficient reason, that there is nothing which can be done. Of course where hot beds are used, early plants may be raised, but it is too soon to sow even in hot beds, the seeds of plants which are subsequently to be pricked out and transplanted in the open air. At the close of the month, or the beginning of February, where a family has none of the advantages of a hot bed, a quantity of seedling plants for open air culture, and on a limited scale, may be raised in the house, so as to be ready for planting out when the season opens. The manner in which this may be done is very simple. Take an oblong box, six or eight inches high and two feet long, by a foot broad. Fill it with rich mould, well sifted, and with a good admixture of sand—Sow the seed in this and place the box in the kitchen window, where the rays of the sun can reach it, during a part of each day—water the bed occasionally with luke-warm water, and cover the box lightly of nights to prevent the possibility of plants being frozen. On mild days lift the sash a little way and admit the fresh air, to give stockiness to the growing plants.

SHEEP.

FRANKLIN, TENN., Nov. 24th, 1869.

To the Editors of the *Maryland Farmer*:

Thanks to our friend, J. W. Ware, for his suggestions in the *Farmer* of November. "Smada," the "Young Farmer," who he "hits" at will try and profit by them, as they are practical, and come from a man who seems to know what he is writing about. On point of crosses I was asking for best cross on common sheep, and advice how to cross my young ewes, (a cross of Cotswold on common and Cotswold and Southdown sheep), did not hint that pure bred sheep would not pay best. My short experience (and I think I can observe) causes me to prefer Southdown to Cotswold, for the very reason that our friend prefers the latter. I found, through the dry season of this summer, the Southdown was always fat and good mutton while the Cotswold were not. We are for mutton sheep that pay us best; and it seems we can raise and fatten much cheaper on our blue grass pastures, than our friend, as we can afford to keep sheep for \$3 per head per year. I do not, however, pretend to say our friend's experience is not right about Cotswold sheep, for on very rich pastures, and highly fed, they are equal to Southdown, which have been acknowledged as mutton sheep the world over.—Besides being easier and cheaper kept, they are much the hardier sheep, having stood the winter better, command a higher price in our early spring market.

Our friend may hint, as he *did say*, "our young friend has been imposed on," that I did not have genuine Cotswold and Southdown ewes, it is nevertheless true, and at the average cost of \$2.50 per head, in the flock. Since I had the use of him to my old ewes, the buck has been sold for \$40. You place me in heading the article, in August number, at Franklin, Pa., instead of Franklin, Tenn. I am proud of this beautiful and rich country, Middle Tennessee, once so prosperous and so nearly destroyed by war; but everything seems to be putting on an improved face. Our County and State Fairs, showed a wonderful improvement in Stock and Agriculture. Indeed every thing is looking up, the "sword has been moulded into the plowshare," and the worn lands are being reclaimed, and everybody busy improving everything. We can boast, thoroughbred, harness, saddle and work stock and pure bred cattle, sheep, and hogs, equal to any in the world. I trust soon to see this country, full of fine Southdown sheep, which I have crossed on my own, having procured a very fine young Buck from my old General (Ewell,) who is doing a good deal for improvement of stock of sheep and cattle.

Smada is modest about his name in public print, but "on a push" will give it, if any gratification to our friend from "Old Dominion." He is a subscriber to and has profited by advice given in *Maryland Farmer*, and still signs himself, Yours,

SMADA.

MARYLAND STATE AGRICULTURAL COLLEGE-- CORN CRIB--CORN SHELTER, &c.

To the Editors of the Maryland Farmer :

I have frequently been asked by my brother farmers, and have asked the question myself of those who ought to know, "What is the Maryland State Agricultural College doing?" The reply is:—"Don't know; something wrong," etc. Is it a State institution, a corporation, a stock company, or what? I allude to the subject with diffidence, and have delayed, hoping that some more competent Marylander than myself would enlighten us on the subject. After Admiral Buchanan's resignation, I concluded that a general investigation would be made, or, at least, something said in justification of those Professors or the Admiral himself. I read in the Baltimore *Sunday Telegram*, some months since that when Buchanan resigned he wrote to the parents of the students his reasons for resigning, that he impeached two of the Professors, one of whom was, on investigation, discharged, &c., &c. I do not know the Admiral personally, or his successor, the present incumbent, (the Rev. Mr. Regester,) either personally or otherwise. Boys in the United States navy, in addition to seamanship and other instruction, are taught obedience and respect to their superior officers, without those qualifications they are not to be trusted in a high or responsible command. A man like Buchanan, who fitted out his little fleet with so much skill, and fought so gallantly and successfully at Hampton Roads, (an event that startled the world, and produced an entire revolution in naval architecture,) would scarcely be willing to submit to the teaching or authority of inferior officers.

Why cannot a squad of our gallant Prince George's canter over to the College some fine morning, 'stride their boasted blooded nags, and report what is going on. A report like that in the October number of the *Maryland Farmer*, by your contributor, "Patuxent Planter" (so interesting, classic, and so graphically expressed,) would be to thousands a rich treat, and afford, in part, the desired information. I have been a constant reader of our State agricultural journals before and since the war, and have no recollection of reading a single report from the College. What we want, and what I think we are entitled to, is an annual report. Let us know the amount of receipts and disbursements, number of students, &c. In addition to receiving a collegiate education, are the boys instructed in stock raising, agriculture, horticulture, arbor culture, botany, moral, religious and all other cultures?—Is there on the premises a work shop, with forges, benches, grindstones, necessary tools and competent persons to instruct the boys how to use

them? Is there a building for housing agricultural machinery, implements, farming and garden tools? Are the work shop, farming and garden tools of best quality? Are they preserved from rust, kept as bright as silver, and the edges sharp as razors? Is there "a place for everything, and everything in its place?" How are the cattle housed, kind of stock and how provided for? What agricultural and garden crops are grown?—Do the Professors join the boys at meals and accompany them on botanical researches? Do the boys receive rations, or are the viands abundant and varied? Is strict order preserved at table? A silent or spoken blessing observed, or is it "Drive in boys?" Are the sleeping rooms properly ventilated, comfortable beds provided, and in the halls water closets communicating with wooden cisterns on the ground floor (lined with zinc,) placed on truck wheels for easy conveyance to a retired spot, the contents covered and mixed with soil for the improvement of the land? Retiring closets ought also to be placed over or near the pile for the use of the servants and out-door laborers; another pile ought to be made back of the cooking department for the reception of waste from the kitchen, sweepings, etc.; it also ought to be composted with earth, and both piles frequently turned over and mixed. These with the contents of the ash pit, accumulating bones, (I estimate the bones obtained from the College at 1,200 pounds per annum, which dissolved with sulphuric acid or otherwise is enough to fertilize thirty acres,) and properly managed stable manure will be ample for applying to the crops without the necessity of purchasing mercantile fertilizers. When instructing a class of boys (or during leisure hours) on the subject of the analysis, of soils and crops, would it not be a source of profit to the Professors and the State generally that samples be sent to them to be analyzed, they being allowed a reasonable price for the information? A farmer has, for example, ten lots or localities; he encloses a sample of soil from each, marked No. 1 to 10, including the requisite fee. The Professor gives the analysis opposite to each number—the farmer holding a copy—which he (the Professor) mails accompanied with a little book containing the analysis of various crops. Then by the farmer comparing the analysis of his lots with the book, purchases fertilizers accordingly, or such chemicals as are actually required to produce a certain crop; as there is a diversity of opinion relative to the value of cornstalks and cobs for feeding, would it not be well to settle the question by analysis, and if really of no value as a fodder, then let us spread the stalks in our barnyards to act as an absorbent, and use the cobs in lieu of firewood. The theory of those who advocate feeding stock on stalks and cobs is that

they extend the bowels and correct acidity. It is well known that a horse will consume his manger if not provided with hay or fodder. Some years since I applied to a chemist to analyse my fresh water ditch banks, which was done, and a *prohibitory* charge of ten dollars was made for the service. It was as follows:

Bone earth or Phos. Acid.....	fair
(viz: Matter.....)	6.7
Iron.....	considerable
Potash and soda.....	some
Plaster and salt.....	notable
Lime.....	small

I was advised to mix with 100 bushels of the earth ten bushels shell lime and two bushels of salt. But finding shell lime had no effect on my (iron) land, I substituted fifteen bushels wood ashes and ten bushels of salt, which acts admirably. I had not the privilege of receiving a collegiate education—my venerated Papa's motto being "eat heartily, drink cider and home-made wine moderately, work diligently, retire and arise early." He thought with Agrippa, "too much learning (will make) hast made thee mad." I served, however, from boy up to President, upward of thirty years, in what may be called an agricultural school. Since then, and during the last ten years, I have followed the plow and delved with the shovel and the hoe.

SURFACE MANURING.

If I am allowed additional space, and do not consume printers ink beyond what I am entitled to, I will refer, if you please, to an able article in the Farmer's Cabinet for 1840 and '41, written by J. Douglass, on the subject of surface manuring. At the conclusion of his remarks, Mr. D. very applicably adds the following lines. "Cowper in his inimitable 'Task' has a few lines so applicable to this subject that I cannot refrain from copying them.—Speaking of the newly made hot bed, he says:—"

[Cowper, of course, alluded to the separation of hydrogen from the carbonic gas.]

"Thrice must the valuable and restless earth
Spin round upon her axle, e'er the warmth,
Slow gathering in the midst, through the square mass
Diffused, attain the surface; when behold!
A pestilential and most corrosive steam
Like a gross fog Bocotian, rising fast,
Asks a gross, which obtained, the overcharged
And drenched conservatory, breaths abroad,
On volumes wheeling slow, the vapor dank
And, purified, rejoices to have lost
It's foul inhabitant."

I am rather opposed to introducing poetry in an agricultural journal, but I have frequently noticed that a few judiciously quoted lines, accompanying an article, imparts more knowledge and food for reflection than does a long prose communication. I would intersperse an occasional line of French and Latin, but not having a knowledge of either language, and believing that nine-tenths of your sub-

scribers are in the same predicament, I am satisfied to confine myself to plain English.

POOR MAN'S CORN CRIB.

In using the words "poor man," I do not mean it in a literal sense. In this district of Baltimore county there are none that I am aware of, if there are I advise them to sell out to Joshua Horner at one dollar per head, and have their worthless carcasses converted into "file and bone dust," and appropriate the proceeds for the benefit of their nearest relatives.

Cut down four trees, (chestnut preferred,) averaging eight inches in diameter, two of them fourteen feet long, and two seventeen feet, giving the roof a pitch of three feet; take off the bark three feet above the butt ends, and char them, or coat with boiling common or gas house tar. Dig four holes three feet deep, twelve feet apart on the sides, and nine feet at the ends of the proposed crib; place a flat stone in each hole for the stanchions to rest upon. Previous to setting the stanchions, cut out of each on the outside squares 3x3 inches and five feet from the surface for four poles, averaging four inches in diameter, forming a bearing for the floor to rest upon, and at the top similar square cuts, but one-fourth less size, for the roof to rest upon, all squared at the ends; secure the bearings to the stanchions with $\frac{5}{8}$ inch hard wood seasoned pins; then lay on crosswise (butt end and small end alternately, in close contact,) poles of sufficient diameter to sustain the weight of corn and roofing, nail on either end of the poles four two-inch strips to keep the poles in place; now nail on either side of the stanchions, three feet apart, strips or poles, horizontally or perpendicularly, and fill the space with hoop poles or cornstalks from floor to roof; thatch the roof with long straw or top corn fodder; on the left and broad side of the crib, erect a piece of scantling and a cross piece to form a doorway; hang the door to the stanchion, and lock it to the scantling. Sufficient air will pass through the floor and stalks to dry the corn; attach below the floor inverted zinc funnels, which is the surest plan for preventing rats from crawling up.—Under the crib will afford a tolerable shelter for implements.

Another Plan.

Lay down a number of fence rails or 3 inch poles, several inches apart, in a corner of the attic, or the loft of an out-door building (where rats do not congregate,) then hoop poles or cornstalks crosswise; throw on the corn promiscuously ten inches deep, with stalks alternately, and so continue to the end.

POOR MAN'S CORN SHELLER.

Make a three legged stool out of hard wood, 20 inches long, 12 inches wide and 2 inches thick;

bore through it a $1\frac{1}{4}$ inch hole, or large enough to pass the butt end of an ordinary sized cob, hammer the ears through with a mallet, small end down; two or three sharp licks will drive an ear through, and the work done with expedition. A $1\frac{1}{4}$ inch iron ring secured over the hole will make a better and more durable job. Either of the cribs or sheller will cost a mere nothing (presuming the farmer has the lumber,) except labor.

Whilst on the subject of corn, permit me to add that your correspondents (in directing how to select seed corn) frequently recommend small cobs. Why not come right down to the stand point, and say, no cob, no husk, no main stalk? Our large horsetooth corn generally produces 14 rows, which cannot adhere to a cob of less diameter than one inch. If fodder, without main stalk is desirable, try the Baden or Chinese tree corn, both of which branch off from the main stalk and produce an abundance of fodder.

I accidentally noticed (a short time since) in the November number of the *Maryland Farmer*, and taken from the *Maine Farmer*, an account of an extraordinary yield of potatoes. The writer says they were planted on the surface in three foot checks.—He attributes his success to the fact that the seed was exposed to increased heat. (In the Southern States it is a common practice to mulch the crop to prevent excessive heat.) If such is the fact, and surface planting in this latitude and south of it is found to be a success, less labor will be required in digging and basketing the crop by the machine alluded to by me in the last July number of the *Maryland Farmer*, a description of which will be forthcoming very soon.

HOG vs. MOUNTAIN MUTTON.

My practice of curing bacon is as follows:

For seven or eight hundred pounds—one bushel ground alum salt; $2\frac{1}{2}$ pounds saltpetre; $\frac{1}{2}$ pound saleratus; 4 quarts sugar or molasses; 3 ounces cinnamon; 3 ounces allspice; 3 ounces cloves and $1\frac{1}{2}$ ounces red and 4 ounces black pepper. Dissolve the salts in about 24 gallons of pure boiling water, previously adding the molasses or sugar. Let the brine stand till cool. Skim off impurities, then add the spices; stir the brine when pouring it on the meat. Previous to brining, place the meat on inclined shelving, and rub on (in equal proportion) salt and saltpetre, for the purpose of extracting the blood. After laying two weeks, rub off the blood with a coarse cloth, and pack in molasses hogsheds, flesh side up. Lay between each layer laths to allow the brine free course. When the casks are full, pour in the brine, covering the entire mass; lay on top narrow inch strips, a broad board crosswise and on it a weight to keep the meat below the brine. Four weeks brining is sufficient. Take the meat out,

wipe off each piece, and rub the fleshy part with clean hickory ashes (rub it in well); and lastly, hang it in the smoke house, hock down. Build a fire of green hickory logs, chips and corn cobs.—Don't let the fire come to a blaze. A few shovelfuls of ashes thrown on will act as an extinguisher and produce uniform cool smoke. Four weeks is long enough for the smoking process. If the smoke house is a cool one, and the light excluded, there will be no necessity of bagging or whitewashing.—During the summer months, however, it will be a good precaution to fumigate the house with sulphur or charcoal, or, if you please, put the bacon in casks, covered and mixed with hickory or oak ashes. I cure my bacon, hams and shoulders, all with the same mixture, believing in the old adage that "sauce for goose is sauce for gander." The sides and clippings I convert into lard and sausage meat. The faces into hogshhead cheese; feet, ears and tails into souse. I allow my farm hands ordinary purchased bacon, or cure it simply with salt and saltpetre—not that the difference of cost is material, but because they would eat my "Westphalias" and bread to the exclusion of vegetables, sauer kraut, hominy, rice, mush, fish, &c.

If gentlemen will cure their bacon as directed, they will find it as rich and savory as mountain mutton or canvas backs.

A good plan for building a smoke-house is to build it two stories high. The first story for ordinary and the upper chamber for the extra cured meat.

The fire ought to be placed outside and the smoke conveyed into the first story through a long winding stove-pipe, and to escape from the second story. Having openings in second floor and at the apex equal to the diameter of the pipe.

At the White Sulphur, Jordan's, Capon and other Virginia Springs, you will notice immense piles of bones thrown out to waste, which, if converted into delicious soup and afterwards bone dust, would go very far towards paying rent.

—•••—
PLOWMAN.

Beans Again.

To the Editors of the *Maryland Farmer*:

The several articles published in the *Maryland Farmer*, on the subject of Beans, covers the subject entirely, with the exception of the form of the Cockstone Bean; the pure article is neither round nor kidney shaped. It is one of the smallest white Beans grown, and differs from all others in form, which is elongated or kidney shaped, with the exception that instead of the ends being rounded, they are angulated.

NORA.

—•••—
Better go a long way about than fall into a ditch,

AGRICULTURAL IMPROVEMENT AND PROSPECTS IN THE SOUTH.

To the Editors of the Maryland Farmer :

Prior to the war, I never was called South of Mason and Dixon's line, to arrange grounds, or erect buildings, for an Agricultural Society, but during the past two years I have made plats of grounds and plans for exhibition buildings, for a number of Agricultural Societies in the South, and for none in the North.

In the absence of all other evidence of the increasing interest in agricultural matters in the South, the fact above stated is unmistakable proof that there is a general awakening to the importance of advancing the producing interest in every manner practicable, and there is perhaps no way this can be effected more rapidly, or with greater certainty, than through the medium of organizing agricultural societies, holding Agricultural, Mechanical and Manufacturers' Fairs.

It has been my good fortune to attend a number of these exhibitions in the South, during the past autumn.

They were generally very interesting and creditably conducted in the main, but I regret to say that I found, without an exception, that sports of various character were introduced and encouraged to an extent, that the interest and usefulness of the Fairs were very materially curtailed. As evidence of this, and that I am correct in my conclusions, as to the baneful effects of introducing sports in a way to conflict, or interfere with the legitimate purposes of the Fair, I will state what I saw at a Fair this fall, then your readers may judge for themselves of the ill effect on this particular occasion.

I was one of seven gentlemen who constituted all the spectators present to witness the trial of Plows at a cattle show, and mechanical exhibition, and yet there was on the grounds at the time not less than two thousand people, and within five hundred to seven hundred feet of the grounds, within the enclosure, where the trial of plows was being made, but the attention of all, except the very small number I have named, was at the time absorbed by a tournament and "rag-a-muffin" turnout. Several new steel plows of very superior construction, also cast plows for surface tillage, which did excellent execution, and an excellent subsoil plow, were being tested, and there were but very few farmers or planters at the exhibition who had ever seen a steel plow or sub-soil plow used, and yet they lost the opportunity of witnessing their operation to see sports that are all very well in their place, but very much out of place when they interfere with, by being made a part of the programme of an agricultural exhibition.

In many districts in the South I found the horned cattle very fine, and the horses good, but the sheep and swine very inferior, but there was evidently a great disposition with the farmers generally to improve their stock, as those offered for sale brought very liberal prices. The number of agricultural machines exhibited at the Fairs I attended, was large, and their character very superior. Most of them were sold at paying prices. The drought has been so severe the past season, over a large portion of Southern and Southwestern Virginia, that the crop of corn is not more than one-fourth of what was anticipated on the area planted. Cotton in many districts also suffered severely.

Very respectfully yours,

J. WILKINSON,

Rural Architect and Landscape Gardener,
Baltimore, Md.

EXPERIMENTS WITH FERTILIZERS.

THOMSON, GA., Dec. 15th, 1869.

To the Editors of the Maryland Farmer :

Thinking a table of some practical agricultural experiments might not be uninteresting to you or some of your numerous readers, I send you the results of an experiment with fertilizers made by me this season on cotton in this, to you, far off region, to let you see how we manage small things down South. The ground was carefully selected, of uniform quality, as near as possible, laid off in one-quarter acre lots with compass and chain, and broken 10 inches deep with a two horse turn plow.

The lot upon which no manure was put was selected from the most elevated portion, so that it could not receive any benefit from the fertilizers upon the other lots. The fertilizers were weighed and applied under my own eye.

The following table will show the result, after deducting the amount picked off of the unmanured lot, from the others, and multiplying the remainder by 4 to get the amount per acre, and that by 7 cents per pound for seed cotton.

I will here also explain the letters used in the table. *Dix Com.* is for Dixon's Compound, as manufactured by Messrs. Shivers & Alexander, of Augusta, Georgia, containing a fair per cent. of salt, Peruvian, dissolved bones, &c., as appears in their printed circular of 1869. *Pr., D. B., Pl.* is a home compound with equal parts of Peruvian, Dissolved Bones and Plaster (no salt,) obtained of Mr. John Merryman & Co., Baltimore, Md., and also of Mr. J. O. Mathewson, Augusta, Ga. *B. F.* is the ground bone of the Marietta Mills, Ga., unmixed with anything else; it should have Peruvian with it to stimulate the young plants. I purpose the next season (God willing) to plant the same lots in cotton with

out any guano at all, to see the benefit the second year.

It is fair to state also that the land was, until this year, used as a low pasture and destitute of vegetation, and has not been under the plow in thirty-five or forty years, and the drought was heavier than usual with us this year. The cotton was not planted until the 12th of May—should have been planted 15th April, especially this year.

This table gives money value of the guano and cotton per acre.

Per Cent.	Losa.		12½		30	
	Gain.		15½		148	
Value of Cotton per acre.	Gain.		Gain.		Gain.	
	Loss.		Loss.		Loss.	
Whole Cost per acre.	8 00		15 00		16 00	
	16 00		16 00		24 00	
Broad-cast.	8 00		8 00		16 00	
	16 00		16 00		16 00	
In the Drill.	8 00		16 00		8 00	
	16 00		8 00		8 00	
Nothing.....	
	
Number.	1		2		3	
	Dix Com.....		Dix Com.....		Pr. D. B. Pl.....	
Number.	4		5		6	
	Pr. D. B. Pl.....		Bone Flour.....		

Some of the conclusions we draw from this and other experiments we have made with salt on wheat in rust years, and cotton in dry years, are—1st, That salt does not pay, and 2d, That Guano will pay even in dry years, as this year sufficiently attests, and 3d, That from 8 to 10 dollars in the drill is enough, as a rule, and 4th, That if more than 8 or 10 dollars is applied per acre, one-half of it should be broadcast. The results upon my crop at large entirely corroborate and sustain these conclusions also. I have principally used home compound, Peruvian, dissolved bone and plaster, in equal parts (no salt.) The Eureka and Soluble Pacific, have also sustained their former good reputation in my hands. I purchased this spring of E. Whitman & Sons, Baltimore, Maryland, one of their double geared horse powers, a 24 inch cylinder thresher, and a Montgomery Rockaway Fan, all proved excellent, but the power is the best I have

ever used or seen, combining simplicity, strength, and quality of material; they deserve this notice of their machine.

Messrs. Editors, I have given you these facts, hoping to add my share of experience to the public good.

Yours, &c.,

Thos. B. West.

Boughton White Wheat.

To the Editors of the Maryland Farmer :

In looking over the July number of the *Maryland Farmer*, I see from an article copied from the *Iowa Homestead* that the above variety of wheat is represented as having originated in Maryland, but knowing this to be a mistake, and thinking probably that some of your readers may wish to know its real origin, I take the liberty to state that it was first introduced by Mr. Chas. H. Boughton, of Essex Co., Va., who about twelve or fifteen years ago, in passing through his growing wheat, several weeks before it was fully ripe, saw a single bunch of several heads which was entirely ripe, which he gathered and for several years cultivated in his garden, and when he had grown enough to seed a small lot, introduced it to the public. Although our friend Boughton has been unfortunate in having lost much of his property during the war, he should not be deprived the honor of having introduced one of the finest varieties of early white wheat.

Yours, truly,

W.

Essex, Va., Dec. 7th, 1869.

To Kill Rats.

A correspondent in the *Southern Cultivator* gives the following: "Gather the common Jessamine flower in the spring, and put them in the buildings infested where the rats can get them, he will find them laying in every direction dead; the flowers should be gathered in the evening and put where desired.

Another correspondent gives the following: Fill a barrel within eight inches of the top with water, scatter chaff about over it so they may not discover the water, and lay a plank or piece of rail against the barrel for conductors; as they jump in on the chaff to play they get drowned. Or take a log, say three feet long, with a hollow six inches in diameter, saw each end off square, and close up tight with planks; bore three holes in the middle of the log with a two inch augur, fill with any trash, put in a place where they frequent, and they will immediately bed in it. Catch at your leisure by stopping the holes.

MUSKRAT TRAP.—Take a barrel, sink it in the ground at or near the hole of the animal, and sprinkle trash over the top, so that it may not be discovered; as it passes out or in, as the case may be, it will fall in and cannot get out.

AGRICULTURAL COLLEGES.

The Hon. Geo. Geddis, of New York, gave a very interesting address to a late meeting of the New York Farmers' Club, in which he says: "The more the idea is abandoned that the students must daily be marched afield the better."

This means that the daily labor tends to do more injury than benefit. The officers of our Agricultural College says, "the labor system has a four fold object.

1st. To give instruction and make skillful workmen.

2d. To farm and fix the habits and taste of industry.

3d. To preserve the student's health.

4th. To aid the student in the payment of his expenses."

I would add 5th. Its moral influence.

If the manual labor system of the Agricultural College is to be abandoned, I do not see the particular and decided reform the founders of these institutions sought. I do not see the use of placing the college upon the farm, for it is of no earthly use of attempting to teach practical agriculture without taking the tools in hand. Then, so far as the views of the books and chemical and other apparatus is concerned, where is the advantage of being upon a farm? The old college system with more attention to the natural sciences, which they are now giving, would give this common classic and scientific education, and our great effort for this *great reform in educated labor*, has been made in vain.

In Michigan, the President of the State Agricultural College took occasion in his address last winter, to find some fault with their Agricultural College, because not more than one-fourth of the students become practical farmers after they graduated. This is owing to the condition of city and country life. I do not think we ought to expect that these colleges,—this reform in education is going to reform the character of our people so soon,—to change the relation between city and country, for those young men are like their fellow young men. The laws and customs of our country favor monied monopolies and aristocracy. We trust the influence of these students will be to check the grasping power, and over-reaching influence of these city classes, and we must not expect too great and sudden reforms.

In that same Michigan Agricultural Report, I find in a volume of 500 pages, about one-third of it was occupied by the Agricultural College. They have been making many nice experiments on their farm with crops, manures, and animals, and their different feeding. When our Experimental Farm gets into this experimental work, how valuable it

will be to the whole State. How interesting it will be to the agricultural student to witness the crops under different treatments; land drained and land undrained; trench plowed, subsoiled and common plowing; cooked and raw food for animals, etc., and then these publications should go to every family in the State.

Our Agricultural College so far has been more successful in its opening than any in the United States, one hundred and fifty in attendance on the first regular term, and one-fourth as many more applied who could not be accommodated. How many of these institutions in other States are trying to raise up a half breed between a classic and agricultural college by trying to get along without labor. I wish they would sit down and write out the good and evil results in both cases and show the balance sheet.—SUEL FOSTER, in *Iowa Homestead*.

Osaage Orange Hedge.

A correspondee in *Coleman's Rural World*, who has had a long practical experience in the cultivation of the Osaage Orange Hedge, and urges the economy and utility of raising the same, gives the following:

My mode of planting and cultivating is: Break and harrow well a strip of ground 9 feet wide; put it in the best of order; take a two horse plow, run a deep furrow, throw the dirt to the mould-board all on one side, so as to leave a straight bank to rest your plants against—which leaves the plants standing straight, while setting. With one person to set, and one to follow with a shovel to cover, two fast men can set 3,000 a day, after the ground is prepared.—If they are strong, average them from 5 to 6 inches apart. Be certain to replant with strong, vigorous plants. For the first two years they should be well cultivated. Use a one-horse plow; don't plow too close to the roots; use the hoe freely in drawing up the loose dirt to the roots. If your hedge is an outside one, you may plant a row of Irish potatoes on inside, by the hedge, for the first two years—nothing that I tried is more suitable to its growth. I have raised fine crops of potatoes in that way, when the ground was suitable. A division hedge you may plant on both sides. To succeed well, the hedge must have the sun and air.

As to the trimming, I believe all agree that the hedge ought to be trimmed in June; after that, I think much depends on the season. I should use my own judgment as to trimming it more than once a year for the first three years. A very important matter is, to head off the top, leaving all the side and lower limbs to make their growth. I commence at the top, trim it down in nearly a half round form barely taking off the points of the lower limbs—this will give you a base of from 3 to 3½ feet on the surface of the ground, of thick, strong growth, which nothing can penetrate. This is the most important item in raising a hedge.

Seeding Down to Grass.

Many of our farmers prefer seeding with pure timothy, especially on lands natural to clover. The clover, they say, comes in fast enough of its own accord. Hay made from pure, clean timothy grass, if cut at the proper season, gives no waste in the manger, it is not so bulky as clover, can be cured much easier, and thus a larger amount of nutritive matter, it is claimed, can be grown per acre. We think farmers often make a great mistake in putting lands down to grass, in not having them in a fertile condition. There is usually no trouble in seed taking, if a good seed bed has been prepared and a liberal amount of manure worked into the soil.

In preparing land for grass we like to scatter the manure over the plowed surface and work it into the soil with the harrow or cultivator. Some people have curious notions about fitting the soil for grass, and seem to fear that great losses will be incurred if the land happens to be fertile. As long as it is in that condition, they think it better to raise corn, barley, or some kind of grain. When these begin to fail, or rather when they can not be grown profitably, the land is supposed to be good enough for grass, and it is straightway seeded down. But heavy crops can not be expected to be grown unless the land is in good heart, and it is very poor economy to keep it under the plow until it is worn, since the cost of bringing it back to a state of fertility will be more than the value of the crops from which the land received its injury.

Another question of importance, on which farmers differ much, is the quantity of seed required for an acre. Some contend that from 6 to 8 quarts of timothy seed is amply sufficient, and in fact insures better results for a permanent meadow than a greater quantity. Others advise half a bushel of seed to to the acre. Something depends upon the land and its condition, it is true, but generally we think too little seed is sown. Some people will scatter grass seed very evenly with the thumb and finger, sowing a certain number of paces at a time, marked out by stakes, but it requires an old experienced hand to put the seed on evenly. Quite as good a way, perhaps, is to follow the harrow, scattering just so wide as it tracks, and if a still day be selected, the work can be done very evenly. The little machine, consisting of a long narrow box, strapped over the shoulders, carried in front, and the machinery worked with the right hand, is a very cheap and convenient device for scattering grass seed. It regulates the quantity, and distributes evenly. There is another way of sowing seed practiced by some, and by which we have seen fine, even meadows made. It consists in dampening the grain, and then mixing

it up with the grass seed. The kernels of the grain being wet, will hold a certain number of the smaller seeds, and as the grain is thrown, carries them with it, and will distribute pretty evenly over the surface. There is one objection, however, which occurs, and that is, as the grain has to be harrowed in, some of the grass seed is covered too deeply. It is rather heavy and dirty work, too, carrying and sowing the wet seed, but the work is very expeditiously performed.

In our own experience, we have scarcely ever failed in having seed take well, and we attribute all our success to having a good fertile seed bed in the first instance, upon which to commence operations. This, it seems to us, is important, since it secures vigorous plants, which are enabled to withstand the cold of winter. When the land is poor, and has been badly worn, the plants have a puny and sickly growth during the summer, and unless the season has been extremely favorable, the risk from winter killing is much greater than upon good, rich land. —*Utica Herald.*

PLASTER AND ITS USES.

Plaster in the different branches of science is known by different names. In the arts it is plaster; in mineralogy it is gypsum; in chemistry it is sulphate of lime. Sulphuric acid has an affinity for ammonia, and when it finds ammonia it break up its partnership with the lime and combines with the ammonia, forming sulphate of ammonia, and this is non-volatile. The lime finds a companion when deserted by the acid, in carbonic acid, forming carbonate of lime.

Hence it will be seen that when the farmer has ammonia in his soil, put there by himself in manure, or in any other manner, liable to waste, the plaster will fix it there, and in all such cases it can be applied to the ground with profit. The odor about stables and manure heaps, is escaping ammonia, and the farmer can judiciously use a little plaster in both places, saving the ammonia for his land.

Plaster saves to the soil nitrogen, one of the chief mineral elements entering into the growth of plants; ammonia is three parts hydrogen and one part nitrogen. Ammonia escapes from decaying vegetation wherever it is found, and is suspended in the air, and when after a long dry spell and considerable quantities of it has ascended, the first rain brings it to the earth, and if there is a little plaster in the clover field, the ammonia never rises again.

The very study into the uses of plaster shows that the farmer should be a student, and in some degree, a man of science. He must learn that in doctoring his soil something else than mineral substances may be needed. He may need organic substances as well, and to know this is the duty of the farmer. —*Ex.*

ADDRESS OF
GEN. HORACE CAPRON,
 (Commissioner of Agriculture.)

BEFORE THE

GEORGIA STATE AGRICULTURAL FAIR,

November 17th, 1889.

It is with pleasure that I have responded to your kind invitation, which I have accepted in the spirit in which it was tendered—a spirit of mutual concession, sympathy, and encouragement. This pleasure is enhanced by a knowledge of the great resources of your State—a soil rich in all the elements of fertility, and suited in its variety to the entire circle of the productions of the farm, orchard, and garden; phosphates and marl in many localities, to repair the waste of continued cropping, and minerals useful in the arts; water power enough to manufacture all the cotton grown in the State, and the implements of agriculture and of other industries; and a climate in which the cereals and fruits of temperate zones may flourish side by side with semitropical forms of vegetation, and in which man may exercise, in highest health and vigor, all his mental and physical energies in subduing nature, enlarging productions, increasing wealth, and enhancing human happiness.

With such resources at your command, with active invention to plan, and an indomitable will to work, who can set a limit to the career of activity and enterprise upon which you have entered? I have come among you with some knowledge of these natural advantages, and with a full appreciation of the laudable ambition that impels you, to speak a word of encouragement, to present the allurements of new hopes and new aims, and ask that, extirpating ancient prejudices, forgetting the things which are behind, you press forward to those which are before, aiming to advance the united interest and brighten the consolidated glory of a great and growing nation.

The change in your labor system involves a radical change in the manner and appliances of cultivation, a necessity which many of you fully realize and thoroughly understand. Free labor, to be most efficient, must be educated labor—in a certain degree skilled labor; it must be supported and supplemented by improved machinery, so that every dollar expended in the exercise of human muscles may become *two* by the magical augmentation of rural mechanism. It is thus that our lands must be cultivated and crops grown, in part by *brains*, in part by *brains*.

This change in labor also involves the necessity for smaller farms, better culture, the use of manures, rotation in crops, and a larger *working capital* in proportion to permanent investments.

Broad acres of impoverished soil, without abundant means for needed fertilizers and fixtures, machinery and farm animals, are not only non-productive, but absolute sources of cost and discouragement—a mill stone upon the neck of enterprise. Without a working capital at least equal to that invested in land, recuperation must be tedious, and the profits of farming small; with its aid in utilizing the labor at command, that which is more efficient and intelligent will naturally flow in.

The result will be a rapid development, a higher condition of fertility, larger crops, valuable and

creditable improvements, good neighborhood roads, larger profits, wealth, comfort, and contentment.

As a natural sequence to this system of industry, variety in production will take the place of an unceasing culture of cotton and corn. The broad capabilities of soil and climate will have free scope and exercise, and while the product of cotton will be greater than now, there will be corn enough for man and beast, an abundance of beef, pork, and mutton, the finest of vegetables, and rarest of fruits, not alone for home consumption, but for the supply of less favored regions. Sugar, in favoring soils, may take the place of cotton as an export crop; sorghum may yield its sweets for local use of dwellers among the hills; a multitude of new and profitable crops may swell by millions the great aggregate of the cash recipes of agricultural labor. Rammie, introduced, in 1855, in the Botanic Garden at Washington, and propagated for years in the experimental garden of the Department of Agriculture, promises to vie with cotton in profit and usefulness, if the manufacturers succeed in improving and cheapening its fabrication, and thus create a great and permanent market for the new fiber, which can be produced in unlimited quantities at reasonable rates.

You have also an immeasurable source of wealth in the cultivation of fruits. Even that most valuable of all domestic fruits, the apple, can be produced here in the highest perfection. It is true that failures have resulted from introducing varieties of northern origin, but your pomologists have collected native varieties fully equal in flavor and keeping qualities to the best of those from any other section.

Merely mentioning the pear and the peach—the latter especially reveling in your bright and lengthened summers—allow me to direct your attention to the fig and grape. The former of these probably requires less skill in propagation and care in culture, or in drying or other preparation for market, than any other fruit of value.

The grape, more capricious as to climate and locality, can here enjoy its favored region. On your hill-sides the best table and wine-grapes of the Northern States will attain perfection, and it is prophesied that only on the elevated lands and mountain slopes of the Southern States will the region be found that is to yield wines equal to a Johannisburger, a Tokay, or a Margeaux; while in your lower lands you have the famous Scuppernon, that even now is highly esteemed, both here and in foreign countries. Vast developments await you in this direction; and when you reflect that even on your worn out land, unfit for corn or cotton, fruits and vines may be produced in the greatest abundance and perfection, the propriety of giving attention to these crops will become apparent.

Nor will this measure of diversity suffice. Manufacturers must occupy the sites of water powers, and the surplus forest products be used in propelling machinery by steam, thus beautifying your State and enriching your people, not only by the products and profits of this industry, but by the stimulus it will afford to agriculture in the consumption of its products and the enhancement of their values. I hope to see the day when, with the help of manufacturers in other States of this country, we may be able to manufacture every pound of cotton that we can produce. You may in self-defense be compelled to do it, as Great Britain is already preparing to colonize India with the skilled labor,

ers of Lancashire, as teachers and directors of the teeming millions whose services may be had for a remuneration scarcely appreciable. Ship abroad among the nations of the earth, at little cost for freights and commissions, all your cotton in yarns and fabrics, bearing the added value of much cunning labor, ready for the markets of the world, rather than depend upon the wants or the caprice of other nations for the sale of the raw material.

The small beginning of five and a half millions of pounds of cotton manufactured in this country in 1791, increasing to fifty millions in 1821, has augmented to four hundred and fifty millions in 1868—one million bales of 450 pounds each—a consumption greater than that attained in 1860. It will continue to increase, and, with its swelling volume, change the whole current of trade, advancing our national wealth and prosperity.

We must not ignore the efforts of the British cotton commission to attain independence of foreign markets through their Indian empire. It is true that the fiber known as "Surata" sells at lower rates than our uplands, but it should be remembered that it is owing more to careless handling than to any defect in the staple itself, and that strenuous and systematic efforts are producing a cleaner and better fiber. If the "Dhery," with their clumsy machinery, have produced from this cotton—with careful manipulation of the fibre from the beginning—the finest thread known, measuring 150 miles to the pound, and running to No. 200 in fineness, may not the teachings and practice of skilled English laborers in India yet incite a sharper competition than we have heretofore encountered? Portions of India possess some of the most productive soils of the world, peculiarly adapted to the growth of cotton. Their production is indicated by the following statement. The annual consumption for the whole of Europe at present is about 3,800,000 bales—it has been greater; of which

	Bales.
America sends about.....	1,500,000
India " "	1,400,000
Egypt " "	250,000
Brazil " "	500,000
Other countries.....	350,000

Approximately.....4,000,000

as reported by the Indian commissioner. Yet I do not believe we are to lose the first rank as a cotton producing nation. Our opportunity lies in a better and more perfect cultivation of the soil, its thorough aeration, draining in heavy lands, and liberal manuring; a more complete adaptation of the implements of its culture to their peculiar work, the invention of labor-saving expedients and processes, and the reduction to a minimum of the costly use of human muscles; a regular rotation system of cropping, by which the soil may be constantly improving rather than continually "wearing out;" and finally, a proper manipulation of the fibre for market, by which uniformity of length, freedom from foreign admixture, and perfect cleanliness may be secured. These are the points in which India cotton is deficient, and in which ours must continue to excel.

To secure a longer, finer, and even staple is entirely practicable. It, however, can only be accomplished by observing the great laws of reproduction on which all improvement in animal and vegetable species is founded. The key to this progress exists in a single word—"pedigree."

Select a plant producing abundantly a superior fiber; plant its seed in a genial and well cultivated soil; select again and again from its progeny the finest and best, discarding all else, and few years will elapse ere marked results will prove the great utility and exceeding profit of the effort. In this connection I present the suggestion of an experimental farm, established by your State Government, and conducted by an experienced and intelligent planter, where new varieties of cotton may be produced and foreign varieties tested. I would also commend to each individual planter the necessity of a constant regard to this principle of selection in the planting of every crop he may attempt to cultivate.

I desire also to call your attention to the importance of a system of co-operation among planters for the destruction of the cotton caterpillar when it first makes its appearance, either as a caterpillar or in its perfect state. While their numbers are few, any expense necessary for their extirpation would be a profitable outlay; when they swarm by millions in every field their presence is disheartening, and their destruction impossible.

Let these considerations be regarded with intelligent labor and a personal supervision by the observant planter, and you may defy the competition of the world, produce a fiber unsurpassed, and realize a profit ample for any want and satisfying every requirement of luxury.

In such views of progress I personally feel a deep and untiring interest. To assist in forwarding them you may command my constant endeavors as Commissioner of Agriculture, and co-operation and aid so far as the limited means at command may permit. The magnitude of the interests involved, and the effective manner in which the Department may advance them, lead me to believe that larger appropriations by congress will hereafter permit wider and deeper usefulness, and that while hundreds of millions are given to railroads, a mere moiety at least may be accorded to advance the progress of Agriculture. This Department now consists of divisions of statistics, agricultural, chemistry, botany, (to which is attached an herbarium,) natural history, and practical horticulture.

The first is the office of publication, from which are issued the Annual Report of nearly a quarter of a million of volumes, and a Monthly Report of 25,000 copies, embodying official data from thousands of correspondents and nearly every county in the Union.

In connection with a museum of natural history, as allied to agriculture, is an economic collection exhibiting the processes of manufacture of the raw products of agricultural industry, in which the textile arts, the making of sugars and dyes, and the utilization and extension of the primitive products of the earth are illustrated and described.

The Experimental Garden, to which has lately been added an arboretum, is a theater of active and intelligent effort, including the test and propagation of exotic fruits for your own favored section, and the introduction of new and promising plants suited to every climate.

The chemical section of the Department is occupied with the examination of the natural sources of agricultural wealth in mineral deposits. The knowledge of the composition and food of plants is being increased by scientific investigation. A series of analysis of cereal grains is contemplated for the purpose of determining the amount of influence which

the latitude, soil, and climate of different localities exert upon the growth of our food plants.

A collection of specimens representing our agricultural and economic geology and mineralogy will afford a valuable display of the rock strata of the whole country, and serve to complete the efficiency of this division.

The library of the Department, though not extensive, is receiving large additions by purchase and exchange with numerous scientific and agricultural societies in Europe, Asia, Africa, and even the Islands of the Pacific.

A system of exchange of seeds and plants is in operation, embracing societies, industrial colleges, and botanical gardens throughout the world. An extensive correspondence is conducted, embracing nearly the entire country, and the whole range of practical agriculture. All these parts of our organization are working harmoniously, and I hope in some degree effectively, and all are laboring for the advancement by equal steps of every section and every rural interest in our broad land; and in the coming general prosperity and universal progress, I hope and pray your favored State may have its full and generous share.

EXPERIMENTS WITH GRASSES.

Levi Bartlett gives, in the *Country Gentleman*, an account of some experiments of his, in the cultivation of different varieties of grass.

In the trial of Lucerne he found it necessary to mow it three times the first season to keep down the weeds. The second year the Lucerne was pretty free from weeds, but different varieties of grass sprang up, and the third year other grasses took the lead, and the fourth the Lucerne disappeared.—“Lucerne should be sown in drills and cultivated with the hand for two seasons, unless the land has been Summer followed the previous year.” When grown on favorable soil and not overrun with other grasses, it is a most valuable forage, especially for milch cows.

Italian and Perennial Rye Grass made a fair growth the first season; but few plants were left the next season. Winter is too severe for it.

Alsike or Swedish Clover gave a good crop for two or three years, but soon gave way to other grasses. It makes the finest quality of clover hay, gives a good yield, and a large amount of seed. If it could be kept free from other grasses, would prove an admirable dry forage for milch cows, and sheep at yearning time.

Tall Meadow Oat Grass gave a very luxuriant growth but nothing would eat the hay made from it, or the second crop on the ground.

Within the past six months there has been some discussion upon the merits of Orchard grass, for and against its culture, value, &c. Some years ago I procured half a bushel of seed, and sowed with western clover seed, but did not get a good catch of the Orchard grass. However, for two or three years I obtained a fair crop of hay; but when the clover

disappeared, other grasses came in, and the Orchard grass all grew in bunches or tussocks. One Fall I turned sheep into the field, and they seemed to relish very much the bunches of Orchard grass, as they ate most of them even with the surface of the ground. It is an early grass, and ripens before most long-leaved grasses. The seeds shatter, so that scattering plants come up in almost every field I stock down to grass. Upon the whole, I entertain a very favorable opinion of it, if it can be rightly cultivated. A years since, in the month of June, I was in Brattleboro, Vt., and saw it quite thickly intermixed with other grasses in the mowing fields. Gov. Holbrook then said he considered it a valuable variety to sow with the usual sorts sown by farmers in his vicinity. Mr. Flint speaks of Orchard grass in the highest terms, as a pasture grass on rich, deep, moist soils. “In England it is an object of special agricultural interest among cattle-feeders, having been found to be exceedingly palatable to stock of all kinds, * * * and also for dry forage. As it blossoms earlier than timothy, and about the time of red clover, it makes an admirable mixture with that plant to cut in the blossom and cure for hay.” The late Judge Buel, Col. Powell, Judge Peters, and Mr. Sanders, a well known practical farmer and cattle-breeder of Kentucky, all wrote of it in the most favorable terms, both as a pasture grass and for hay.

In England there is usually sown, in stocking down land for pasture or mowing, from 10 to 15 varieties of grass seed, in weight ranging from 40 to 48 lbs. of seeds; and doubtless the British farmers find it for their interest to seed thus heavily.—Whether or no such a course would be advisable in this country, I have no means of judging, as I am not aware that such a practice has ever been tested here.

To Destroy the Striped, or Cucumber Bug.

A correspondent at Littleton, N. C., writing us on business, adds:

“I send you an item for the *Maryland Farmer*, if you think it worth publishing, which effectually protected my melon, squash, cucumber and other vines from that destructive pest, the “striped or cucumber bug,” the past season, with only one application, viz: A strong solution of hen-house manure—say one peck of the manure to one and a half gallons water—let it stand 24 hours, and sprinkle the plants freely with it after sunset.

The above was suggested to me by a negro woman living on my place, who has some practical experience in gardening, and says she has used it for years, and has never known the first application to fail to drive them off, and they never return.”

Better ride on an ass that carries me, than on a horse that throws me.

From the New York Evening Mail.

THE VINE IN EUROPE.

Recent Observations by an American Vine-Grower.

Practical Details for Practical Men.

BY CLARKE BELL.

GERMANY AND THE RHINE—CONTINUED.

The general name of Rhine wines is given to a large class of white wines produced in Germany, and which are exported into all the world in enormous quantities.

A very large proportion of these wines find their way to the United States, as our enormous German population have brought with them, in addition to their taste for lager, their well-known love for the Rhine wine, which can now be had, and of fair quality, in every respectable German restaurant in this country.

This Rhine wine is the *vin ordinaire* of Germany, and the wine which is universally drunk by all classes. It is dry, rich, and generous, contains but little of alcohol, and is a healthful beverage. It costs very little in Germany, and is so cheap that the importer here, after paying freight and high duty, in gold, can furnish it as cheaply, if not cheaper, than the pure native Catawba can be obtained.

Contrasted with our native white wines, they have less bouquet, but are smoother and drier, and seem to have a finer taste and flavor, show more of care in handling; but they lack the character, the body, and many of the characteristics that make our native dry wines appreciated, and for which they are most praised by those who have drank sufficiently of them to acquire a taste for them.

Contrasted with the white wines of France, to my taste they are inferior. There is a richness, a delicacy, and a flavor in certain of the higher grades of the white wines of the South of France, that I have never seen equalled, and I do not believe that any white wines in the world can excel them in flavor.

The Hocks.

It is the Hocks of Germany doubtless that would be selected by the German as a test if his wines were to be compared with other wines. They are quite familiar now-a-days to most Americans who have given the subject any thought. It is quite impossible to give their names, as the number of brands that have established reputations is very great.

These Hocks are wines of great excellence, and they have been brought, by years of patient endeavor by these most careful, patient and industrious men, into as high a state of excellence as it would seem possible to attain.

While they frequently differ widely in quality, in vineyards that are almost contiguous, and where apparently the same care and system has been observed in the manufacture, those differences about which so much speculation has been had must, I think, be attributable to differences of soils and the mingling of varieties rather than to other causes.

The relation of the soil to the wine, which all vine-growers appreciate and recognize, seems to have been never fully investigated or explained.

That the soil controls the character and destiny of the wine is now usually conceded; but the laws

which regulate or govern it are as yet unwritten, because unknown and undiscovered. More thought and attention is given to this subject of the science of culture in France than in Germany, but it is in its infancy everywhere, and must all be worked out yet, both there and here.

The wine press is of universal use in Germany, and the grapes are pressed in the cluster with stems and seeds, the German fancying that this is essential to add necessary astringency to the wine.

There are distinct qualities in the stems and seeds of the grape, which undoubtedly lend the wine other qualities than mere astringency.

That it does add a certain peculiarity of taste to the wine is unquestionable, but in most countries outside of Germany this is deemed objectionable.

The Germans use larger casks for fermentation, as well as for the preservation of wine, than the wine maker of any other country of the world.

It is said "the larger the cask the better the wine," and so casks of most enormous size are used for keeping wines in Germany. The average size contains about three hundred and fifty tuns of wine, while the enormous tuns of Tubingen, Gruningen, and Konigstein, the last of which is said to have contained 3,709 hogsheads were some of the wonders and curiosities of German wine-making of the older time. The most extraordinary and wonderful of all these is that of

Heidelberg.

This celebrated tun merits more than a mere allusion, and I avail myself of a fine description furnished recently to the *New York Times*, by a correspondent whose name I do not know:

"Who, in the wide world, has not heard of the Heidelberg Tun, whose capacious maw can hold 300,000 bottles of wine. Some over-wise person affect to scorn the homage paid to this Brobdingnagian feat of cooperage; but sooner or later their curiosity gets the upper hand, and they too make the accustomed pilgrimage to the shrine of the idol. The length of the tun is thirty-two feet, its height at the ends twenty-two, in the middle twenty-three feet. On one side a pair of stairs leads up to a large railed platform on the top, where many a merry dance took place in the cheery days of old. Now, all is silent and damp and close. I ascended the stairs and set down on the railing. The floor bears the marks of use,

The present tun is not the first of its line. An abundant vintage in the year of grace 1589 induced Johann Casimir, a jovial man as well as an excellent prince, to order the construction of an immense wine cask, to be a memorial in all future ages of that joyous year. The most skillful master cooper in the land was entrusted with the work. It was completed in 1591, and filled with the best wine of the country. The length of this monster of casks was twenty seven feet; more than six tons of iron were employed in the construction of the hoops alone. It was, however, not destined to corporeal immortality. The thirty years' war numbered it among its most illustrious victims.

But in 1664, the Elector, Charles Lewis, ordered the complete restoration of Heidelberg Castle, and finding the remains of the famous cask in the cellar, he resolved to build another, superior to the first. The second cask soon arose, like a phoenix from the ashes of its unlucky predecessor, decorated with greater splendor, and rejoicing, if aught inanimate can rejoice, in increased capacity for drink. It was twenty-four feet high and thirty feet long. Alas!

the French armies, to whose ferocity we owe the ruins of the Rhine again desolated Heidelberg. The big tun escaped destruction, it is true, but it lay unused nearly half a century in the ruined castle, and was only saved from falling a victim to the dry rot by the interposition of another Elector, Charles Philip, who in 1727 caused it to be repaired and refilled. But its heart had been broken by that long period of total abstinence, and in a little while it fulfilled the parable about putting new wine into old bottles, by quietly bursting one night, and drowning out the rats and mice with a flood of delicious liquor.

In 1751 the Elector Charles Theodore ordered the construction of a third tun, which should surpass the former ones in size and strength, and remain a lasting monument of his reign. This is the present Heidelberg Tun to which thousands of devoted votaries make pilgrimage from far and near.

Beside the gigantic tun lies a cask of the ordinary size, which is a great curiosity in its way. It is without hoops, or any other visible means of holding itself together. The master cooper who perfected this singular specimen of his art died without revealing the secret to the world, and no one has ever been able to fathom the mystery.

It is now many years since the great tun was filled with generous wine, many years since the vintage dance sent a thrill through his iron ribs. Dismal must be his dreams, condemned to involuntary teetotalism of the driest kind! There was a project set on foot a few years ago to rejoice his thirsty heart with new wine again, but it fell through, and probably it will not be renewed. He has had his day, and must suffer the universal fate of earthly things. It belonged to an age of huge and gross, though hearty merriment, when oxen were roasted whole in the castle kitchen, and were served upon the royal table with immense platters of potatoes and cabbage. Royalty dines more delicately now, and prefers champagne to the quiet wine from the old-fashioned tun in the cellar."

It is common, however, to ferment the wine in smaller casks but still much larger than those used in France, and after repeated rackings, to place them at last, when done in these enormous casks for keeping.

It is the pride of a German wine cellar to have these large casks.

They sometimes seem to accord rank to the cellars, according to the size of their casks, and it was this idea derived doubtless from the Germans, who early aided Mr. Longworth in his wine cellars that led him to put in his vaults those large casks of the capacity of some three thousand gallons (as I remember them), and I think upwards of that figure in some instances.

It is doubtful if these large casks are adapted to our wines, and the more successful of American wine makers have latterly adopted in preference the French methods, both of fermentation and keeping, and with very marked improvement in the flavor and quality of their wines, discarding the use of these large casks. A sixty gallon cask is the usual size for keeping and shipping wines at Bordeaux, and probably one hundred and sixty gallons is the largest cask that should be used for keeping wine here.

The Culture.

Most American vine-growers are familiar with German methods of culture from the fact that so many Germans from the Rhine and other portions

of Germany are already here, and are the most readily obtained to take charge of vineyards.

It was almost exclusively Germans that commenced the culture at the various points in this country where it has been most successful; and our growers have almost universally employed Germans in the culture in New York, Ohio, and Missouri.

The soils are frequently trenched from two to three feet in depth and thoroughly underdrained. The plants are almost always obtained from cuttings, and the knife is most freely used on Fall and Winter pruning. This is done usually after the leaves fall in the Autumn, but sometimes not until February. The Summer pruning is extensive and lavish, and extends not only to the laterals and long canes, but to the fruit itself if the vine seems heavily loaded, which is quite usual. The plant being smaller than our own the pruning is different, closer and very much is cut away that would be suffered to remain here, where vines are larger and set so much further apart.

The work is mainly done by hand, women doing a large portion of the work in the vineyards. Strong and coarse manures are used in Germany, which seems strange, as in France this is thought very deleterious to the fruit and wine, of which there can be but little doubt.

The instrument in use in most of our American vineyards, and known here as a grape hoe, is an importation from Germany, and the whole surface of their vineyards are thoroughly and constantly stirred with this during the Spring and early Summer. Manures are carried into the vineyards in baskets, on the backs of the laborers, and so far as my observation extended scarcely any use was made of the horse or the ox in culture, the labor of all kinds falling on the men and women.

The willow is used for tying up the vine wherever trellises are used, and it is grown usually contiguous to the vineyards. The women do the tying up, the Summer pruning, and the picking, and in many vineyards the major part of the heavier work of cultivation.

The stakes are small and short, not more than four or five feet in height, and about an inch and a half to two inches in diameter. The appearance of the vineyard is small, and the vine makes no spread and show as with us, but it has usually that fine rich color that indicates health and vigor.

(TO BE CONTINUED IN OUR NEXT)

BLACK LAMBS.—Dr. Randall, author of the *Practical Shepherd*, in answer to a correspondent who inquired if a black Merino lamb proves impurity of blood on the part of the sire or dam, says it does not, and adds:

"We have heretofore stated that black lambs occasionally appeared among the pure blood flocks of Spain in their palmiest days—that they appeared, and continued to appear at rare intervals in their best descendants in the United States. To the question whether they should be excluded from the flock, we answer yes. A black ewe may never have a black lamb—yet we should expect this color would be more likely to crop out in some of her descendants, than in those of a white ewe, and consequently that breeding from her would increase the tendency in the flock to produce black lambs."

Look to the Implements.

The practical editor, Philip R. Freas, Esq., of that good old family and agricultural paper the *German-town Telegraph*, discourses thus briefly on the proper care of tools, &c., which are so sadly neglected by our farmers generally :

"It is a lamentable fact that a large majority of our farmers lose as much from a want of proper care of tools as from the actual wear and tear of them.—Repeated wetting and drying spoils, sooner or later, any kind of woodwork ; the moisture getting into the cracks soon increases them. This may be prevented by a timely and occasional application of some cheap paint. Much has been said and written upon the value of tool-houses, and it is hardly necessary for us to add our mite to the general collection ; but providing the tool-house is not all that should be done—the shovels, spades and forks are brought into the tool-house with the dirt sticking to them, and in that condition they remain through the winter, or until they are again needed. All practical farmers know how much better a bright plow turns the furrow, how much easier it is on the team and driver, and yet they will bring their plows and harrows in every spring and fall with the dirt sticking to them, and allow them to remain in that condition until again wanted, much to their own loss and expense. There are various mixtures which might be applied to the iron to prevent rusting, the cheapest of which is common (*unsalted*) grease. A better article may be formed by melting together six pounds of fresh (not salted) lard and two of resin. An old iron pot is a good thing to keep and compound the mixture in. As soon as a tool is done being used for the season, clean it off and give it a coat of this mixture, and even if it remains undisturbed for years, it will come out as bright as when put away."

PREMIUM OF A DRILL.—"The" Buckingham, of this city, always "wide awake," (as we learn from the *Rural Southerner*, published and edited by the young and enterprising Echols, at Atlanta, Ga.,) has offered his drill as a premium. He says :

"Mr. W. Buckingham, general agent for Bickford and Huffman's grain drills, proposes to present at the next Cherokee (Georgia and Alabama) Fair, one of his drills, as a premium to the grower of the best ten acres of wheat, the coming crop."

The competitor who uses the drill on his ten acres will double his chances for the prize. The Drill has become an institution in the country, and no intelligent farmer South can afford longer to turn his seed wheat in by the "tree drag," a mode known to a few in the Cherokee country, even in this age of agricultural progress.

Bickford & Huffman's Grain Drill.

The special committee on Field Trials at the late Fair of the New York State Agricultural Society, Hon. J. Stanton Gould, chairman, offered the following report in relation to the improved grain drill of Bickford & Huffman, for which W. L. Buckingham is general agent, in Baltimore :

"Bickford & Huffman grain drill. Weight 500 pounds. Price \$85.

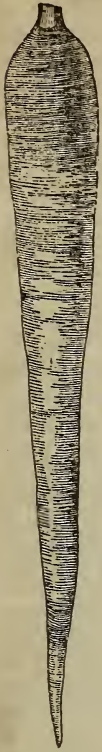
This well known machine which has so often and so deservedly received the commendation of the Society, presents the following improvements over those hitherto exhibited. The hub is increased in diameter so as to give one inch more length of tenon to the spokes. It is made of hard wood throughout. It has been supplied with intermediate wheels which double the number of variations that could be previously given to it. The elongated funnel of former times is replaced by two funnels, the end of one entering the upper part of the one below it, the upper one being of gutta percha as formerly. A very important improvement is made by which the danger of encountering fixed obstacles in the ground is overcome in a very satisfactory manner. There is a fixed and broad-headed pin in the drag bar, and another in the locking tumbler ; these are connected by a very thick gutta percha band ; if therefore the tube catches on any fixed obstacles, the band stretches and allows the tube to extend until it becomes in a line with the drag, when released from the obstacle the band draws it at once into its place. This we deem a most valuable improvement."

CLUB ROOT IN CABBAGES.—Mr. C. A. Dunning, of Denton, Md., in reply to a Mr. Quinn's offer of \$100 "to any one who will give a remedy for club root in cabbages," which was offered through the American Institute Farmers' Club, "recommends an application of fifty bushels of lime per acre every six years. He says this is a sure preventive of club-root in cabbages."

Jershua Sutton, of Ohio, also gives the following : "Prepare the ground in the fall with a light coat of well rotted barn manure, and a coat of well leached wood ashes (say one inch thick ;) spade deep in the spring, then set the plants, and then give the land a light sprinkling of salt ; stir the ground often. By following this method I have raised good and large cabbages twelve years in succession on the same land. The soil should be clay, loam, and sand, of equal parts "

The only objection to the wood ashes is the heavy cost of the material, save in localities where it was abundant.

A prominent New York farmer believes that the loss to farmers who do not cook food for stock, is from 20 to 40 per cent.



LONG ORANGE BELGIAN.



EARLY FRENCH SHORT-HORN.



LONG ORANGE.



LONG WHITE BELGIAN.

CARROT.

The carrot should always be furnished with a good, deep, rich soil, and as free from stones and lumps as possible. It is waste of time and labor to try to grow roots of any kind on a poor or unprepared soil. Seed should be got in early, so as to have the benefit of a portion of the spring rains.— Sow in drills about an inch deep; the drills about a foot apart; and at thinning, the plants should be left at from four to five inches apart in the rows, according to kind. The Short Horn may be allowed to grow very thickly, almost in clusters. To keep the roots nice for table use, place them in sand in the cellar; but for feeding, they will keep well in a cellar, without covering, or buried in the ground. An ounce of seed will sow about one hundred feet of drill, and two pounds is the usual quantity per acre.

The following is a list of Carrots, as classified by Vick in his catalogue, to whom we are indebted for the above illustrations:

Early French Short Horn, small; best for table; preferred by some for all purposes, even for stock.

Surry, or Studley, good; fine keeper.

Long Orange.

Altringham, selected; red; fine.

Altringham Yellow, a fine variety.

Large Orange Belgian Green-Top, rich, fine for feeding.

Long White Belgian Green-Top, fine for Cattle.

GREASE YOUR WHEELS.—"Some persons may not be aware," says Hicover in his work, *Bipeds and Quadrupeds*, "that trifling neglect of a pair of wheels being comparatively dry or well greased, will cause twenty miles to take far more work out of a horse than forty miles would in the latter case; yet wheels absolutely screaming from dryness, are often seen and heard attached to carts and wagons; and thus would the brute in human form, let them scream till he had finished his journey's end, or his day's work, though his horses were drawing from such cause, at least one ton in four of resistance more than they would if the defect were attended to."

THE Emperor of Russia gets \$25,000 salary a day; the Sultan, \$18,000; Napoleon, \$14,219; the Emperor of Austria, \$10,060; the King of Prussia, \$8,210; Victor Emanuel, \$6,340; Victoria, \$6,270; Leopold of Belgium, \$1,643; and President Grant, \$68.50.

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RENEWALS.

We would remind our readers, whose subscription commences in January, that this number of the *Farmer* is the beginning of a new volume. An early RENEWAL is solicited—which can be done by enclosing us \$1.50 for one year. At the same time each of our old subscribers might, with very little trouble, send us one or more new subscribers for the year 1870. Let all make an effort, and thereby place us under obligations to them.

How to Double our Subscription.

By each of our present subscribers sending us a new name—which can be done in almost every neighborhood. This suggestion being carried out the *Maryland Farmer* would receive an impetus that we know would be advantageous to ourselves, and we believe, promote the interest of agriculture.

NOW IS THE TIME!

Our friends should commence now to procure subscribers for our new volume for 1870. By a united effort our subscription list can be swelled to double its present large circulation.

IMPROVEMENT OF THE HOMESTEAD.

We do not know of any subject in regard to rural affairs that is better calculated to enlist the interest of our readers than that which relates to the improvement of the homestead. The time is now coming when farmers in the Middle States will perceive the many advantages which they possess over those of the new States of the West, and the profit which may be derived from steadily holding their lands, and bringing them up by a judicious course of manuring and a more perfect cultivation, to the highest point of fertility of which they are capable. We believe, moreover, that the stream of emigration westward will, in the course of a few years, be gradually diverted towards the older States, and especially towards the Middle and the Southern States, where the climate is mild and agreeable, the labors of the farmer less severe, and the social advantages are of the best. They have also good roads, good markets, fine water ways, and facilities for railway transportation, schools, churches, and country stores of easy access. All these are to be found only in States that have long been settled, and where the population has become to a certain extent, fixed.

Now, whilst we have every reason to hope that year by year the productive capacity of our soils will be increased, and that their value will rise in proportion, and that instead of being slow of sale when put upon the market, will find ready purchasers, we also believe, that if the homestead itself is neglected, and it presents but little appearance of comfort and but few adornments in its surroundings, the members of the household will miss one of the greatest charms of country, and the neighborhood where such a want of taste exists will lose many of its attractions in the eyes of persons who desire to settle there, and to turn their attention to business pursuits.

We are satisfied, nevertheless, that it needs only proper hints for the improvement of our homesteads in a judicious and economical way, to set their owners to work in the process of embellishment, and to this end we propose to commence in the *Farmer* a series of articles, offering such suggestions on the subject as we deem may prove of value in fostering and strengthening the sentiment of local attachment by adding to the agreeable associations which naturally surround the dwelling in which we have lived, and the ground we have planted with trees and shrubs and flowers. But the suggestions we propose to make will, for the most part, be elementary, and to a considerable degree will be such as embody the fruits of our own experience. We shall not treat at all upon the construction or improvement of houses on a grand scale, nor of embellishing the grounds according to the highest rules of

art—for of these things we know but very little.—But what we want to do, and what we hope to be able to do, is to show how, by a trifling outlay and a little labor judiciously expended, many of the plain and unpretending structures which now constitute the homesteads of our farmers may be converted into neat and tasteful dwellings, which would be the pride of the family and an ornament to the neighborhood. In addition to these hints for constructing new buildings or improving old ones, we propose to explain the elementary principles of landscape gardening in their application to the ordinary wants of our rural population. We think that practical hints on these points may prove of service to a large class of our readers, and we are sure that they could find no pleasanter or more profitable occupation than in acting upon them to the best of their ability. The first article on the improvement of the homestead will appear in our next number.

FARMERS' CLUBS.—The value of a Farmers' club in any locality is very great. It is easy to get one up, and now that the leisure time of winter is coming, those farmers who take a real interest in the advancement of their profession should lose no time in getting up clubs. A few intelligent, stirring men in each township, ward, or community of settlers can easily start and keep going a good club. When the thing is undertaken, let active men take hold, and once started, keep up the life of the matter by intelligent and useful discussions on any and all subjects connected with agriculture that may come under their observation. One proved is worth a thousand theories. Above all, keep out those noisy fellows who will bring the discussion of political matters into everything they can, in order to subserve their own interests and gain a foothold in some paltry municipality ward election.

The rules need be but few and simple. First, a Secretary should be appointed, whose business it will be to keep a book in which to record the names of members and the minutes of each meeting, taking notes of any valuable suggestions or facts that may come out during the discussion. If a school-house or town-hall is near, it may be used for the place of meeting. If not, each can in his turn have the meeting at his house, if he has a room large enough. There should be a chairman for the first meeting, and at each meeting a chairman should be chosen for the next meeting, and the subject of discussion fixed upon. At each meeting, let the chairman commence by giving out the subject to be discussed, and when that is done with, let any member give a new subject, or relate any practical experience he may have met with. They may regulate the times of meeting according to their ability to find subjects to discuss.—*Canada Farmer.*

BROOM CORN---ITS CULTIVATION.

We have received a letter from a 'Subscriber,' says the *Farmer's Journal*, (Lexington, Ky..) asking for information concerning the cultivation of broom corn, how to save it and prepare it for market, &c. Now that labor in our State is scarce and unreliable, there is a disposition manifested by many farmers to try some other crops than those they have hitherto raised, and as broom corn requires but little labor comparatively, and yields a profit much larger than that derived from many other crops which demand a greater expenditure of force, means and time, we think it is well adapted to the condition of our people. It is now selling in Chicago and elsewhere for from \$170 to \$200 per ton for inside brush; \$200 to \$250 for stalk braid, and \$220 to \$280 for choice hurl. The following directions will comprise all the information sought by 'a subscriber:—'

1. It is important that the ground should be good. It ought to be as fresh as you would want for Indian corn. It should be well broken, and, if harrowed, is all the better for it.

2. Plant the seed in the spring, (not too early,) when the ground is warm and in good condition.

3. Rows should be three and a half feet apart, and the seed should be drilled. One stalk of corn should be left, if too thick in the row, six inches apart.

4. Cultivate well—all depends upon good cultivation. I always cultivate in the same manner as Indian corn, and never permit any weeds to grow.

5. Cut when the seed on the stalk are in the milk. One hand should go ahead and "table," to be followed by the cutters. One hand will table for four or five cutters.

6. "Tabling."—This consists in bending the stalks of two rows diagonally across each other, about two feet from the ground. The brush projects beyond the row, and is then cut and laid on the table, thus formed, to dry. The third row is then cut and laid on the same table; by this means the "wagon row" is cut—that is, the wagon row to every six rows. I will explain: a, b, c, d, e, f, represents six rows; a and b, e and f, are table rows; c is cut and placed upon the table of a and b; d is cut and placed upon the table rows of e and f. It is easy to see that c and d are wagon rows, with a table on each side convenient for loading into the wagon.

7. Cutting—If the brush is large, six inches of stalk should be left to it; but to the small brush much more—say eight to twelve inches. Knives should be procured with good handles, and kept sharp.

8. Threshing the seed off is the next thing. A cylinder of wood, twelve inches long and ten inches

in diameter must be provided. It should be of solid wood. Into this, iron or steel spikes should be driven, two inches apart, with three left outside the cylinder. This is propelled by horse-power; but, for very large crops, I recommend steam power.—Machines are now manufactured, greatly improved, for this very purpose.

9. Curing.—Sheds must be provided for this purpose, so that the corn can be perfectly protected from the sun and rain. I put my corn in racks eight inches apart, leaving abundance of space for free ventilation.

10. The yield is from four hundred to one thousand pounds to the acre, the latter figure being a large yield.

11. Baling is done in a hay press. The brush should be laid straight, with care, and the bale may be fastened by wire or hoop poles.

12. The cost of cultivation is just equal to that of Indian corn, until it is ready to cut. The cutting, hauling and threshing requires eight men per day for each acre of corn, besides two teams and one wagon. This includes putting it on the racks for curing. The cost of baling is just double that of baling hay.

13. We would advise those going into the business of broom corn raising for profit, to begin with five or ten acres until they acquire some experience.

The seed costs about three dollars per bushel; it may be obtained for less in some places. One bushel, properly put in, will plant twelve acres, and the usual yield of seed per acre is fifty-five or sixty bushels.

CURING MEATS.—A Massachusetts writer says: I cure and smoke 50,000 to 100,000 pieces per year, and know my business. Meat cured in pickle made of water is not as good, and only used because more profitable and less laborious. The flavor of cured meats depends mainly upon the kind of molasses used. The best temperature is 40 degrees; frozen meat will not cure, and if above 50 degrees will be liable to taint. For 100 lbs. meat, take 8 lbs. salt, 1 quart of best molasses, or 2 lbs. sugar, $\frac{1}{2}$ lb saltpetre, 2 ounces ground alum; mix and rub on the fleshy side of the meat, placed in pans so as to keep all the mixture; repeat the rubbing every three days, rubbing in thoroughly. For large pieces, and cold weather, sixty days will be required; if mild weather, fifty days, and fifteen days less for small pieces. The skin and fat of hams should be cut clean from the face, as far down as the second joint, to allow the salt to enter.

When horse stables are not properly ventilated nor lighted, it is an excellent plan to make a small window where each horse may thrust out his nose when he is not eating, and breathe pure air.

The Poultry House.

How To Make Turkeys Useful.

In Normandy, where the Crevecoeurs are principally raised, they have a curious fashion of hatching eggs. As the hens are not inclined to set, and are at best only ordinary mothers, the good women of the peasantry have a fashion of pressing young hen turkeys into the service. This they do in the following way: Take a female turkey of the preceding year that has never laid, and put her in a basket containing plaster eggs. Cover this basket with a strong linen cloth. It will be from four to six days before she will overcome her natural disinclination to sit, and, become attached to the eggs, or as the French have it, "take an affection" for them. When the prejudice is entirely overcome, they place the real eggs under, she easily covering 18 or 20 of them. The covering is removed and the innocent turkey accomplishes the task assigned her without further trouble, save that it is necessary to remove her once a day that she may partake of refreshments. If this is not done, these "setters" sometimes starve to death, rather than voluntarily leave their charge, so great is this forced affection. After hatching, the little chicks are placed in charge of another turkey, and the mother, supplied with a new lot of eggs, continues her mission." These young turkeys are thus made to hatch three or four "litters" in a season.

FATTENING FOWLS—HOW THE ENGLISH DO IT.—Among the various modes of fattening fowls, which are, from time to time, presented to the public, none is more highly commended than the following, which is the method largely practiced in England, and it is said, always with great economy and perfect success. In this method the custom is to put the fowls into coops as usual, but where they can get no gravel. Keep corn in their feed boxes all the time, and also give them corn meal dough, well-cooked, once a day. For drink give them fresh skimmed milk, with a sprinkling of charcoal well pulverized in it.

Fed in this way, it is said they will fatten nicely in from ten to twelve days. If kept beyond that time, it is customary to furnish them with gravel to prevent them from falling away. One extensive English fowl breeder states that he has tried this method for years, and has never known it to fail. In this method, as in all others, it is of course necessary that the fowls should occupy coops protected from the cold, and kept perfectly clean and dry.

LEG WEAKNESS.—This disease arises probably from overgrowth. As regards the treatment, the fowls should be kept dry, and be fed on a nourishing and stimulant diet, including some animal food, mixing citrate of iron with it to the extent of three or four grains a day. Tonics may also be advantageously administered in the water, by dissolving one pound of sulphate of iron in a gallon of water, and adding to the ordinary drink of the fowls just enough of this solution to make it taste slightly inky.

How to Build an Ice-House.

Ice as a summer luxury may as well be enjoyed in the families of farmers generally, as in those of the villages and cities. The mode of preservation is so cheap and simple, that it lies within the means of almost any one. If two, three, or half a dozen neighbors would unite and build a house, if not more than ten or twelve feet square, and fill it, there would be a full summer's supply of ice for all. But a better way would be for each to have his own to use and control as he sees fit.

The advantage of ice in summer does not all consist in furnishing cool beverages, but if a little apartment is made in one corner of the place of storage, many articles from the pantry may be kept fresh and nice that would soon spoil or become rancid if exposed to the warm atmosphere.

The best location for an ice-house is upon the north side of a building, but it should not be under the eaves. Digging a pit is of no profit whatever; ice will keep just as well above ground as below, and it is generally believed a good deal better. The great secret lies in packing well. A space of ten feet square and eight feet high will hold about twenty tons. Lay the sills a little above the ground and build up two walls by nailing boards upon posts one foot apart. Lay on joist before the roof is put on; nail a floor upon these, and give a good coating of saw-dust. This obviates the necessity of double roofing.

No floor is required at the bottom; just put in a good bedding of some non-conductor of heat: spent tan bark, rye-straw, charcoal and saw-dust are all good for this purpose, but the latter is the best, and the others should not be used if this can be obtained handily; it is sweet, porous, and does not decay or become musty, so as to affect the ice, and through it a good drainage is furnished.

Pack up the cakes when the weather is cold; fill all the interstices with pulverized ice, and then, pour on water, and the whole will be frozen into a solid cake. The cakes should not be placed against the walls, but left off a few inches, so as to give free circulation of air. Double doors are not absolutely necessary, but it is advisable to have them when convenient. A small tube from the room should extend through the roof to give ventilation.

A cheaper construction than the one above is suggested by one experienced in the keeping of ice. He asserts that any one who has an old shed or wood-house has all the essentials for an ice house. A corner of the shed may be rough boarded at a trifling expense, and will answer every purpose of a hundred dollar ice house. No pains need be taken to double board the sides. The ice may waste some with so little protection, but with a

plenty of saw dust to fall down the sides as it melts, it is soon protected by a breast work as securely as Gen. Jackson behind his cotton bags.

Cover the ice with an abundance of saw dust, and give it good ventilation. If the house is ten feet square, it is very convenient to saw the cakes of ice two feet square, as they will thus pack away without any waste space, and in like manner with any sized house, the cake should be sawed so as just to fill it; if any seams occur between the cakes they must be well filled.—*Ohio Farmer.*

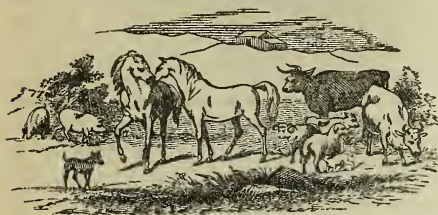
How Long can Grass Fields be Cropped without Manuring.

This is certainly an important question with us where so many fields are annually cropped of their burden of grass and no return made to the soil, but the produce carried from the farm and shipped to western markets, after a few years of such cropping we find our fields "running out," as we term it; and no wonder, for as the old adage has it, 'how can we expect to be continually drawing from the spigot if we put nothing in at the bung.' There is a great difference in our varieties of soil in regard to 'holding out' for grass. Our rocky rough uplands will maintain their fertility and produce annually crops much longer than the lower, sandy and more friable soils, which if not top-dressed or cultivated every two years or so will soon be non-producing. The fact as regards the matter is, hay should never be sold from the farm, not at least unless its equivalent is returned in some form of fertilizer. But it is annually done, so we are brought to the consideration of the question at the head of this article.

We have just been reading of a farmer in a Western State who has cut and sold hay from the same fields for fifteen years without returning any manure to his acres. But, it is added, that farmer never fed his fields; he never allowed the aftermath or second crop to be cut or fed off. Therein was the productiveness of his field. By cutting the grass early the second crop obtained a good growth before winter, and being allowed to remain, acted as a mulch and fertilizer to the roots during the cold and decaying the next year was a good manure for the plants. If the second crop had been cut or fed off we venture to say his fields would not have produced crops worth harvesting for the half of fifteen years.—*Progressive Age.*

MANURE should never be exposed to the action of the weather while accumulating in the barnyard. Keep it in a pit or cellar, where it receives the wash from the stables. This keeps the mass moist, and for the purpose of perfect decomposition, a quantity of plaster is added. The result is a manure so well rotted and minutely divided that when mixed with the soil every young rootlet finds a supply which can be readily appropriated and absorbed.

Live Stock Register.



DIFFERENT BREEDS OF SHEEP.

The great interest existing in all parts of our country in sheep, induces us to offer the following brief notes of the characteristics of various breeds:

Natives.—These are mainly of English origin, mingled to some extent with other continental blood. They are called natives simply to distinguish them from other later and improved breeds. The English were long legged, narrow breasted, coarse woolled, and light quartered animals. A fair average weight for them was about 12 pounds per quarter. History tells us that as early as 1676 New England was well supplied with sheep. The yield of wool in those days was from two to three and a half pounds per sheep, which does not compare unfavorably with that of the present day, but the mutation was not up to the present standard. The original natives have become so mixed with later importations that they have become nearly extinct:

Spanish Merinos.—Celebrated as being a fine woolled breed. It is divided into several families, as the Escorial, noted for the exceeding fineness of their wool; the Gaudaloupe, noted for their symmetry of form, fine quality and good quantity of wool; the Negrettis, Infantados, Panlars and others. The Merinos vary greatly, not only in Spain, but in all countries into which they have been introduced, the climate and soil having a great influence on them. They all, however, retain to a remarkable degree, their prominent peculiarities, which are fineness of wool, comparatively small size, short l-gs, hardness and longevity. They were introduced into this country near the beginning of this century. In 1809 and 1810, 3,000 were distributed in several different States, imported from Spain. The French Merino is a family established from the Spanish breed to a larger size than their progenitors. Their wool is not the best, though it is good; the skin disposed in folds; a very yolkly, heavy fleece, with little external gum. This breed has become unpopular, and has been generally discarded.

Saxon Merinos.—This is properly only a branch of the Merino family, although regarded by some

as a distinct breed. Their wool is remarkable for exceeding fineness; but their fleeces are thin, scarcely exceeding two pounds; they are of fragile constitution and require extreme tender care, and are not generally regarded as reliable or profitable for our Northern climate.

Silician Merinos.—Are an offshoot of Spanish stock originating in Silicia, from Infantado ewes and Negretti rams, imported some 50 years since. Randall, in his "Fine Wool Husbandry," deems them well fitted for improving coarse families of Merinos in evenness and fineness of fleece, they are of good size, fleece yolkly and dark, but destitute of gum. Having been bred with skill and care they are claimed as hardy.

American Merinos.—This is an improvement on the Spanish and may be classed as the Jarvis, the American Infantado—Atwood and Panlar. The Jarvis are the result of a mixture of the Leonese varieties, judiciously bred to an established standard.—Their characteristics are a loose, thick skin, with few corrugations; little external gum, and comparatively light colored; fine, even fleece, with a brilliancy and style almost equal to the Saxon. The American Infantados were bred from Humphrey's importation by Stephen Atwood. They are of large size, short necked, short hipped, broad shouldered, round and symmetrical; skin loose and mellow, and of a deep rose color; wool short, very yolkly, and of a quality, style and evenness scarcely surpassed. Various breeders have produced a fleece from about six to ten pounds; some of the heaviest ram fleeces weighing about 30 pounds. The Panlars are a heavy, thick fleeced, very hardy variety, improved of late years; with less fineness and evenness of fleece than either of the two preceding, less yolk and external gum, but much more than the Jarvis.

Leicester—This is a long woolled breed and described thus: head should be hornless, long, small and tapering toward the muzzle, and projecting horizontally forward, eyes prominent, with a quiet expression, ears thin, rather long, and directed backward; neck full and broad at its base, nearly straight from the hump to the poll; breast broad and round, with no angular formation where the shoulders join the neck or back; the arms fleshy and even down to the knee, bones of the leg small and standing apart; no looseness of skin about them, and comparatively bare of wool; chest and barrel deep and round, the ribs forming a considerable arch from the spine; barrel well ribbed home, with no irregularity of line on the back or belly; carcass gradually diminishing in width towards the rump; quarters long and full with muscles, like those on the fore legs, extending down to the hock; thighs wide and full; legs of moderate length; pelt

moderately thin, but soft and elastic, and covered with a good quality of white wool. This breed is large and heavy, of good constitution, and hardiness and fecundity, but are poor nurses. They require high pastures and feed. Mutton, rather too fat for the table.

Cotswolds.—This breed is superior to the Leicesters in weight of wool, hardiness and vitality.—They are much more prolific and are excellent nurses. They have good form and size, the rams often attaining a weight of 300 pounds. Wool of moderate fineness, long, white and strong, the fleeces averaging eight or nine pounds. They have a long, thin head, well set on, and a broad chest, with a well rounded barrel and straight back. They vie with the Leicesters in rapidity of growth, and are docile, and unsurpassed in size and weight. Mutton, fat, but better intermixed than the Leicester.—They are used for crossing with other breeds to obtain early lambs for market. They require rich pastures; where these are abundant they are invaluable.

South Downs.—Have a hornless head and a long, gray or brown face, thin lips, and under jaw, woolly ears and forehead, full bright eye, thin neck, widening to the shoulders, and a deep wide breast, projecting forward; back flat, projecting from shoulders to the tail; loin and rump broad with wide hips; belly straight, like the back; legs of medium length; bones fine; wool short, curled and fine, destitute of fibrous spires that give the felting properties. They are prolific and hardy, and their mutton is esteemed the best.

Shropshire Downs.—This breed resulted from several crosses of the South Downs with hardy, short woolled stock. They are healthy and favorably regarded for their fecundity, early maturity, weight of carcass and wool, and facility of fattening upon a comparatively small amount of food. Fleece glossy and much sought for, for certain lustrous goods.

Oxford Downs.—These are a Down cross breed of considerable importance; they have gray face and legs, with fine well set heads, small bones, deep brisket, round hams, flat backs, straight bellies, and rather short and fine legs. They are very gentle, quiet and orderly; easily kept thriving on scant fare, and are very prolific. The lambs thrive very fast, often attaining 100 pounds weight at five months of age. This breed yields a very desirable quality of thick and heavy wool.

The number of threshing machines in the United States is estimated at about two hundred and twenty-nine thousand, and they save five per cent. more of the grain than the flail. The saving by them annually is about ten million bushels,

USEFUL RECIPES.

FOR FOUNDER IN HORSES.—Clean out the affected foot or feet, fill full of spirits turpentine, touch fire and burn them out. The horse will be well in a few moments.

FOR COUGH IN HORSES.—Clean out, and pare the frog of the fore foot—hold the foot up and fill with spirits turpentine—hold it up till it soaks in, then take the other up and do likewise. I have cured them, with this treatment, with the worst form of a cough I ever saw a horse have, and never knew it to fail, but in one instance, and I presume, the cause of it was, that the foot was so hard and iron, that the turpentine would not soak in. I held up the foot as long as the horse could stand on one foot, and it did not seem to penetrate in the least. I tried it frequently, with the same result.

CURE FOR HOG CHOLERA.—Feed your hogs on the ground with shelled corn, and while they are eating, sprinkle them plentifully with fresh slaked lime in a fine dry powder, until their hair is full of the lime. Whether it is what they eat with the corn or what they inhale, I am unable to say—probably both; but it has never failed to arrest the disease when tried. It should be done once a day until the disease disappears.

HOW TO CURE WARTS ON HORSES, MULES OR COWS.—Dissolve $\frac{1}{2}$ lb. of alum in a quart of water; with a brush or cloth wet the warts twice each day for 10 days—they will disappear. I saw this recipe in some of the agricultural works as a cure for warts on cows' teats. I tried it on a young horse, whose nose was entirely covered with them. They were very troublesome and tender, often bleeding. Four applications entirely cured or rather took them off.

GRAVELLED HORSE.—Give two-thirds of a table spoonful of saltpetre in a little salt, for three consecrated days; or take a pint of water melon seed, and boil in two quarts of water, till reduced to nearly one-half, and drench two mornings in succession; your horse will be cured.

FOR SWEENEY, take half an ounce Pulverized Cantharides (Spanish Flies,) put into half a pint Sweet Oil, shake well and apply well twice a day. It need not interfere with the work of the animal.

FOR BOTS, drench the animal with half a pint of thin tar, which, I am told, kills them instantly.

BOTS.—One-half pint whiskey, one-half pint of gun powder, one-half pint of molasses, and one-half pint soft soap, will cure the worst case of bots. Another cure is—"a strong tea made of Mullein."

WARTS ON FOWLS.—Make a strong solution of saleratus, or soda water, (the latter is preferable); take a soft piece of cloth or feathers and bathe the warts twice a day, (after first scarifying them); in a few days the warts will entirely disappear.

LICE ON CHICKENS.—Sprigs of cedar, scattered about the fowl house, will relieve them of this awful pest. Tar in the chicken trough is a preventive of disease.—*All the above from the Southern Cultivator.*

FOR A BRUISE OR BLOW.—Apply hot water a long time with wet cloths. Beef brine is an excellent lotion for both sprains and bruises. A veteran among horses, claims, that it will almost set a joint or heal a fracture. Wormwood or tansy lotions are also good.—*Allen's Domestic Animals.*

WANTED.—At least 5,000 new subscribers for 1870 to the *Maryland Farmer*,

Horticultural.

CULTIVATING ORCHARDS.

Considerable difference of opinion exists among farmers respecting the best method of cultivating orchards.

As far as my observation extends I think that the usual modes of cultivating orchards may be divided into three classes: 1st, leaving them unplowed, but pasturing them more or less, either with all kinds of stock or with hogs only; 2d, plowing every year, and raising annual crops of grain, or vegetables; the former are sometimes pastured in the green state; 3d, subjecting them to the usual rotation of crops, in the same manner as other uplands.

In the first, or non-plowing method, we find the ground covered with fibrous-rooted perennial or annual grasses, the roots of which require, for their full support, all the rain that falls and can be retained for a sufficient time in the soils, in a common season; but the roots of the tree also require, for their luxuriant and full growth, the whole of the rain that falls or can be rendered available.—The roots of the tree being lower in the ground than those of the grass, are deprived of a portion of their moisture by the grass roots which first receive the benefit of it. The trees are therefore obliged to send their small roots to the surface to contend with the grass roots for their necessary moisture. Thus there are two sets of roots in the same soil, each requiring all the available moisture present; the consequence is, that the fruit, not having sufficient nourishment, grows slowly, and much of it drops off, neither acquiring the proper size nor proper degree of ripeness; and the grass (if of the fibrous-rooted perennials,) not seeding, on account of being closely pastured, extends itself by its creeping roots, and, though necessity, multiplies them to an indefinite extent, making little growth above ground, and that only fit for pasture.

By the second method, that of plowing every year and raising crops of grain and vegetables, it must be obvious that for part of the time we escape the disadvantages of the first system, the crop sown not requiring the whole moisture and strength of the ground, until considerable growth has been made, during which time the moisture will have free and easy access to the roots of the tree, the soil being loose from the recent plowing. But, after the crop sown has attained half its growth, and from that time until it is ripened, the struggle will be in some measure as before, but I think mostly more favorable to the tree. I believe that both the fruit and the grain will suffer less, and that

neither will be so imperfectly supported as in the first method. For the soil being loose, the moisture will penetrate deeper to the roots of the tree, after passing through the soil where the roots of the grain are foraging, and during heavy rains much will sink into the ground which, by the first method, ran off.

In the case of the second method, where the ground is plowed and sown with grain to be pastured when green, observation leads me to believe that the best plan is to break it up in the spring and sow with oats and grass seed, (clover is best;) this oats may be pastured moderately while young; but if pastured too closely, it leaves the ground and grass seed without protection from the sun. The clover will protect the ground in some degree, from the cold of winter, and when plowed in the next spring would enrich the ground.

The third method seems in a measure to combine the disadvantages of the other two; for commencing at the point where the sod is broken up for corn, we have two years in which the ground is frequently plowed, and, of course, all the tree roots within range of the plow are cut off; and a crop of corn and a crop of oats are grown and taken off, and a crop of wheat sown. Up to this point the third method is similar in both the actual work and in effect to the second. The labors of the plow are now dispensed with for four or five years, and sometimes longer. Clover, timothy, herds, or other grass seeds are then sown, and the whole is laid down for mowing or pasturage, and when a close, firm sod is formed, the tree becomes stunted for moisture, and fibres are thrown out from the roots upward to seek support in the upper soil from which they had been cut off by the plow; thus for a time the energies of the tree are spent, not in producing fruit, but in struggling for its existence.—Two or three years are thus spent when the situation of the roots is the same as that which I have mentioned in the first method—that is, there are two sets of roots in the upper strata of soil. Now the plow is again introduced and the roots cut off for two years, and the tree compelled to again throw them out; thus the tree is compelled to work for an existence instead of employing its energies in producing fruit.

I have now given the three most common plans, and will now give my own. My orchard, which contains one acre, is divided in two equal portions. Before the orchard was planted, the whole acre was thoroughly plowed, and one half acre was then planted, the other half was cropped with potatoes and wheat alternately, and every year a few trees were planted. The first half acre was planted six years ago, and the other half is now all planted.—The vacant half has produced three crops of pota-

toes and two of wheat, and is now well set with clover, which *pastured* four pigs last summer and fall; it had three light coats of pig-pen manure.—The other half has produced one crop of potatoes, one of wheat and three of clover, and is now occupied with the second crop of wheat. The two parts now stand, one wheat and the other clover; next year they will not be disturbed, and after that I expect to crop them with wheat and potatoes, so as to have one well set with clover (nothing else) for the pigs during the summer and fall. All the time I keep one of them in with clover.

In cropping, the ground is well manured on the clover; it is then plowed, and potatoes *dropped* (not laid) in every third furrow; these are taken out in the fall by commencing on the inside of the patch and gathering or plowing inward; after the first two rows the potatoes are turned out by every third furrow, the plowing being carefully done; the ground is then well harrowed, and the wheat is drilled in and sometimes top-dressed with partially rotten, strawy manure, made in the horse stables during the summer. This protects the wheat and trees during the severe cold of winter.

I think one cause of the failure of our orchards is, that the trees start too soon in the spring. To prove the truth or falsity of this theory, I have covered the ground under one-half the trees in the orchard set with clover with common wheat straw well tramped down; this was done before the frost left the ground and should be taken off as soon as all danger is over. My theory is, that the straw, by shading the ground, will retain the frost therein longer than usual. Am I right or wrong, Mr. Editor?—*Cor. Germantown Telegraph.*

The Apple Tree Borer.

The following we extract from the remarks of Mr. J. T. Everett, of Princeton, Mass. before the New England Fair, upon the subject of "Insects Injurious to Vegetation": "This worm lays its eggs, from four to six in number, from the 20th of August to the 10th of September. They are laid six, eight or ten inches from the surface of the ground, upon the butt of a tree—generally upon the smaller apple trees, because the larvæ when hatched require the tender bark of a tree to feed upon. The worm, as soon as hatched, commences to feed upon the bark, just where it is hatched. You will see these eggs laid as I have mentioned, just about the size of the head of a small pin, lying in a row one above the other.

How to Destroy the Apple Tree Borer.—Some writers have recommended the destruction of the egg, and that would be a very effectual way of disposing of them, if you could only discover all the eggs, but that is impossible. But if you examine

your trees, you will discover evidence of the operations of the borer, for, as he works through the bark, he opens the pores and a little moisture exudes, which grows black by exposure to the air. This is readily seen, and the worm is easily destroyed if you can take him at the right time. You can destroy all the borers in an hour or two if you begin in season. The only effectual method is to take your knife and dig them out, any time within a month or two after they are hatched. They are then generally not more than an inch from the spot where they began to bore and you will have no trouble; the little insects that would destroy your entire tree and might destroy a ten, fifteen or twenty dollar bill, is himself destroyed in a few minutes. But if you suffer him to remain six months or a year, then his destruction becomes much more difficult to accomplish, and is much more injurious to your tree.—When he gets a third as large as a pipe stem and something like half or three quarters of an inch long, he begins to bore into the wood. He bores in half an inch and then he immediately commences an upward progress, throwing the refuse of his labor at the bottom in the form of a little yellow sawdust, which is easily detected. I have frequently taken a little round chisel and cut in until I found him, and taken him out. If he has got up more than three or four inches the best mode is to take a wire and destroy him. You can tell by the feeling of the wire when you hit him. He generally goes in a perfectly straight line like the locust, and is easily destroyed in the modes I have described. These borers are very destructive. If you leave them the first year, they almost always come out the next year, sometime in June or July, cohabit, lay their eggs and perish, or are transformed and go through another process of being, like most other insects.—The borer comes out of a hole about a foot from the surface of the ground, and a person who had not studied the character of these insects and their different forms of life would not know what the hole was. This worm, as I said before, is more destructive to the apple tree than any other, and more destructive than either of the two other worms to which I have alluded, from the fact that many farmers do not understand his operations, for they are more clandestine than the others."

SCALDED OATS.—An old farmer, says the Ohio Farmer, claims that there is no feed so good to keep animals in flesh during winter as scalded oats. For mares, cows, and sheep, that are to raise young, it is superior to almost any other feed, as it not only puts the animals in good condition to furnish milk abundantly, but the young at birth are strong and active. Wheat bran is also an excellent feed for breeding animals given in the form of a mess.

Why Scalded Meal is More Nutritious than Raw.

The nutriment afforded to animals by seeds and roots depends upon the rupture of all the globules which constitute their meal or flour. These globules vary in different roots, tubers and seeds.—Those of potato starch, for instance, are usually from fifteen ten-thousandths to four-thousandth part of an inch; those of wheat rarely exceed the two-thousandth part of an inch and so on. From experiments made on these globules by M. Bapsail, the author of "Organic Chemistry," and M. Biot, of the French Academy of Sciences, the following conclusions have been drawn:

1. That the globules constituting meal, flour and starch, whether contained in grain or roots, are incapable of affording any nourishment as animal food until they are broken.

2. That no mechanical method of breaking or grinding is more than partially efficient.

3. That the most efficient means of breaking the globules is by heat, by fermentation, or by the chemical agency of acids or alkalis.

4. That the dextrine, which is the kernel, as it were, of each globule, is alone soluble, and therefore alone nutritive.

5. That the shells of the globules, when reduced to fragments by mechanism or heat, are therefore not nutritive.

6. That though the fragments of these shells are not nutritive, they are indispensable to digestion, either from their distending the stomach, or from other causes not understood; it having been found by experiment that concentrated nourishment, such as sugar or essence of beef, cannot long sustain life without some mixture of coarser or less nutritive food.

7. That the economical preparation of all food, containing globules or fecula, consists in perfectly breaking the shells, and rendering the dextrine contained in them soluble and digestible, while the fragments of the shells are at the same time rendered more bulky, so as the more readily to fill the stomach.

On a clover ley, plaster operates most favorably. Spread broad-cast early in the spring at the rate of 100 pounds per acre, it increases all our grasses. Clover is doubtless more benefited by its action than the other grasses, as the ash of clover shows over 30 per cent. of lime. Plaster is found to act with great efficacy in connection with wood ashes, as they supply the inorganic elements in which plaster is deficient.

The damage caused in the vegetable world by insects every year, is estimated to amount to more than twenty millions of dollars.

Cow-yard Manure.

The *American Stock Journal* has the following in relation to the importance of saving manure of the cow-yard:

Talk to a farmer about the value of manure, and the importance of collecting and saving it for future use, and he is astonished that any one should suspect that he is not master of that subject, practising it to the last shovelful. Then take a walk with him to his summer cow-yard, where the milking is done mornings and evenings, and the lane leading to it, and you will find the droppings of perhaps 6 months or a year scattered about, trampled into the dust, and partially washed away by the rains, to the amount of cartloads. One cartload of this is worth more than two from the barn-yard, as any practical gardener will tell you. But the farmer looks upon these droppings, many of which are reduced to a powder, as beneath his notice. There is a waste, that might have added ten bushels of wheat to his granary or a ton of hay to his hay mow, if it had been collected every week and properly applied. One hour's labor every week would have saved all this, which would have been worth more in producing crops than a ton of so-called phosphates, at a cost of sixty dollars in cash. These droppings always make their mark when applied to the land—the phosphates not always.

These remarks do not apply to all farmers. There are many honorable exceptions, and their fields show it to their advantage, but there are too many to whom it will, and their fields tell a tale too, not much to their credit. We hope some of them will take the hint, and do better in future. Fields are terrible tell-tales.

MICE-GNAWED TREES.

To restore the life of a tree injured by mice, the *Maine Farmer* suggests, to take several small twigs of the tree, cut them long enough to reach over the space where the bark has been gnawed off, and insert them under the bark both below and above the girdled place. Insert a sufficient number of these for the sap to ascend, bind outside of them a piece of elm bark or even an old piece of oilcloth, and in a short time the wound will entirely heal over, and the tree will continue to grow.

Mice seldom attack old trees; it is those with young and tender bark that they are most liable to gnaw. The mulching that some farmers use about their trees, however, furnishes a good house for mice through the winter, and more injury often results therefrom than if no mulching were used.—We recently passed an orchard that had been mulched the present fall with straw. Now this straw about the trees will surely afford protection to the mice the coming winter. Had it been put on last spring, it would have got somewhat decomposed and settled together by this fall so that the mice would not have inhabited it. The same is true of nearly all substances used as mulch, such as coarse straw manure, straw, chip dirt, &c. They should be put round the trees in the spring, as by such a course they really do more good as a mulch than if put on in the fall, and mice will not infest them through the winter.

HOMESTEADS IN MARYLAND.

A friend of ours, whose talents we have much respect for, was fond of saying he had that advantage which every writer or speaker should possess, "he knew his subject," and to the author of the following we are willing to ascribe the same necessary knowledge. Who that has ever visited Southern Maryland but knows the advantages it possesses.—Here the farmer has "both woodcock and pheasant in season," the best of game and fish attract his attention and reward his time. The associations of society, distinguished for its culture and purity form his companionship, and the land rewards the husbandman with fertile crops. Such homes are as far superior to those Western wilds, remote from the civilization of the seaboard, that we feel a keen regret to see them offered at so small a price.

"How few buyers of land take into consideration the actual value of the soil. Strange as it may appear, if two farms of equal fertility and natural advantages—one with no improvements except good fences and rough barns, every necessary out-building, and a comfortable dwelling, highly improved grounds, fine orchards, &c., be put in the market, the chances are the latter will bring not more than \$5 per acre more than the former. The cost of building, the labor and time required to build, the long time required for fruit trees to reach bearing maturity; all is lost sight of, and the purchaser, to save a few dollars in the first outlay, will have to spend twice as much as the farm cost him, to have things put in order, to give him comfort, or even to live decently. In the present time the cost of building is enormous. A farm well fenced, with every required out-building, a good house and a fine orchard, with ornamental grounds and the appurtenances of a first-class farm, is intrinsically worth three times what it would be if it had none of these improvements. The purchaser is then ready to begin the work of life. A man had better give \$10,000 for a farm of 100 acres so improved and ready for enjoyment and return of interest on the amount invested, than pay the same for 1,000 acres of unimproved, though fertile soil. There are many such highly improved farms in Southern Maryland, convenient to schools, churches, mills, workshops, railroads or water navigation, yielding heavy crops, surrounded by the most agreeable and intelligent society; the luxuries of the bay and rivers at easy command; with a climate healthy, scenery beautiful, and the soil easy to cultivate and susceptible of the highest culture, now in the market at prices ruinous to seller, ranging from \$25 to \$80 per acre.

"The size of these is from one to five hundred acres, and most of them would be sub-divided to suit purchasers. And yet we find these neglected

by purchasers or capitalists, preferring to buy the wild lands of the far West at \$6 to \$40 per acre, without a house, fence, or hardly a tree—away from society, from the great marts of commerce and the centre of refined civilization, the seat of the national government. They lose sight of the great value these lands will be in the future, when the District of Columbia will be one vast city, ten miles square, and Baltimore has become the London of the South. The rapidly increasing population and wealth of these cities indicate these results beyond the shadow of a doubt. I am neither warped in my judgment by prejudice or interest when I say there is no safer or better field for the land speculator than is now presented by Southern Maryland, as the Baltimore and Potomac Railroad is approaching its successful completion. There is no section in the Union of the breadth of territory, which offers so many inducements to the capitalist; the lover of rural life, with ease of access to town; or to the man of means who wishes to indulge in a luxurious quiet with every enjoyment of a balmy, healthful climate, of a soil teeming with fruits and vegetable products, and of water alive with the rarest delicacies of fish and fowl. Our fish, oysters, crabs and terrapins, with the Ortolan, Bluewing and Canvass-back, constitute a paradise for the epicurean."

THE PARKISON HOG.—A subscriber asks us to inform him "who has this old time breed of hogs for sale?" Not knowing ourselves, can any of our readers give the information? If so, let them do it in the February number.

CARE OF HORSES.—When a horse refuses to eat, says the *Ohio Farmer*, he should not be made to do any more service that day, for it may be known that he is tired out or sick. It is barbarous to compel a horse to perform labor, when in such a condition that he refuses grain, yet it is often done, and by men too, who think they are merciful.

Every farm should have one good orchard, the size varying according to the size of the farm, and this orchard should contain a choice assortment of all the leading fruit. The farmer who to-day has on his place a thrifty, middle-aged orchard, should not wait until those trees begin to fail before he sets out another one, but should have one started and growing.

A MODEL HUSBAND.

I saw a model husband in a dream,
Where things are not exactly what they seem;
A moral man, to skeptics be it known:
The wife he loved and cherished was—his own
And for the test—I saw the husband wait,
With horse and chase five minutes at the gate.
While Jane put on her things, nor spoke one sour
Or bitter word, though waiting half an hour
For dinner; and like Patience on a throne,
He didn't swear to find a button gone.

Ladies Department.

A BIRD SONG.

A little bonnie bird I know,
With breast more soft than eiderdown;
A dress she wears of dappled brown,
And sings with sweeter tone, I trow--
Ah! sweeter far this birdie sings
Than all the birds the summer brings;
And yet her song is only this:
"I love you papa!" then a kiss.

Nor tenderest song of nightingale,
Nor sparkling trills and gurgling gush
Of joy from velvet-throated thrush.
Nor brilliant pipe of mottled quail,
Nor tuneful plaint of whip-poor-will,
The measure of her song can fill;
And yet her song is only this:
"I love you papa!" then a kiss.

SELECTED.

REMEDY FOR A CROSS HUSBAND.

"Bedlam let loose! Pandemonium in rebellion! Chaos turned inside out! What is the reason a man cannot be allowed to sleep in the morning without this everlasting racket raised about his ears? Children crying—doors slamming—I will know the reason of all this uproar."

Mr. Luke Darcy shut the door of his bedroom with considerable emphasis, and went straight to the breakfast parlor.

All was bright and quiet and pleasant—Bedlam wasn't located just there, and Mr. Darcy went stormingly up stairs to the nursery.

Ah! the field of battle was reached at last. Mrs. Darcy sat in her low chair trying to quiet the screams of an eight month old baby, scion of the house of Darcy, while a rosy boy of five years lay on his back, kicking and crying in an ungovernable fit of childish passion.

"Mrs. Darcy!" enunciated Luke, with a loud and ominous precision, "may I inquire what all this means? Do you know that breakfast is waiting?"

"I know, Luke—I know," said poor, perplexed Mrs. Darcy, striving vainly to lift the rebellious urchin up by one arm.—"Come, Freddy, get up and be washed."

No-o-o!" roared Master Freddy, performing a brisk tattoo on the carpet with his heels, and clawing the air at a furious rate.

Like an avenging vulture Mr. Darcy pounced on his son and heir, carried him to the closet and turned the key upon his screams.

"Now, sir; you can cry it out at your leisure. Evelyn, the nurse is waiting for the baby. We'll go down to breakfast."

"But, Luke," hesitated Mrs. Darcy, "you won't leave Freddy there!"

"It's temper that is at the bottom of these demonstrations, and I'll conquer that temper or know the reason why. It ought to have been beaten long ago, but you are so ridiculously indulgent."

"But if he'll say he's sorry, Luke?"

Mr. Darcy tapped sharply at the panels of the door.

"Are you sorry for your naughtiness, young man?"

A fresh outburst of screams and a renewal of a tattoo was the answer.

"I am sure he is sorry, Luke," pleaded the mother, but Mr. Darcy shook his head.

"Entire submission is the only thing I will listen to," he said shortly.

Evelyn, with a dewy moisture shadowing her eyelashes, and a dull ache at the heart, followed her liege lord down to the breakfast table.

A tall, blue-eyed young lady, with bright chestnut hair, and cheeks like rose velvet, was at the table, by name Clara Prun, by lineage Mrs. Darcy's sister. She opened her blue eyes rather wide as the two entered.

"Good gracious, Evy, what's the matter?"

"Nothing," answered Luke, tartly.

"Something is the matter, though," said Clara, strewdly.

"What is it, Evelyn? Has Luke had one of his tantrums?"

Luke sat down his coffee cup with a sharp click.

"You have very peculiar expressions, Miss Prun."

"Very true ones," said Clara, saucily.

Evelyn smiled in spite of herself.

"It's only Freddy, who feels a little cross, and—"

"A little cross!" interrupted the indignant husband. "I tell you, Evelyn, it's quite time it was checked. Oh, that parrot! what an intolerable screeching he keeps up! Mary, take that bird into the kitchen, or I shall be tempted to wring its neck. What does all these eggs, Evelyn?"

Mr. Darcy gave his egg, shell and all, a vindictive throw upon the grate.

"And the plates are as cold as a stone, when I've implored again and again, that they might be warmed. Well, I shall eat no breakfast this morning."

"Whom will you punish most?" demanded Miss Clara.

Luke pushed his chair back with a vengeance; and took up his stand with his back to the fire.

"Please sir," said the servant, deprecatingly advancing, "the gas bill—the man says would you settle it while—"

"No!" roared Luke, tempestuously. "Tell the man to go about his business; I'll have no small bills this morning."

Mary retreated precipitately; Clara raised her long brown eyelashes.

"Do you know, Luke," she said demurely, "I think you would feel better if you would do just as Freddy does—lie flat down on the floor and kick up your heels against the carpet for a while."

Luke gave his mischievous sister-in-law a glance that carried certainly to have annihilated her, and walked out of the room, closing the door behind him with a bang that would bear no false interpretation. Then Clara came round to her sister, and buried her pink face in Evelyn's neck.

"Don't scold me, Evy, please, I know I have been naughty to tease Luke so!"

"You have spoke nothing but the truth," said Evelyn quickly. "Clara, sometimes I wonder how I can endure the daily cross of my husband's temper."

"Temper!" said Clara, with a toss of her chestnut brown hair. "And the poor dear fellow hasn't the least idea how disagreeable he makes himself."

"Only this morning," said Evelyn, "he punished Freddy with unrelenting severity for a fit of ill humor which he himself has duplicated within the last half hour."

"Evelyn," said Clara gravely, "do you suppose he is beyond the power of cure?"

"I hope not; but what can I do? Shut him up as he shut up little Freddy?"

Evelyn's merry, irresistible laugh was checked by the arch, peculiar expression in Clara's blue eyes.

"The remedy needs to be something short and sharp," said Clara, "and the dark closet system combines both requisites."

"Nonsense!" laughed Mrs. Darcy, rising from the breakfast table in obedience to her husband's peremptory summons from above stairs.

Luke was standing in front of his bureau drawer, flinging

shirts, collars, cravats and stockings recklessly upon the bedroom floor.

"I'd like to know where my silk handkerchiefs are, Mrs. Darcy," he fumed. "Such a state as my bureau is in, is enough to drive a man crazy!"

"It's enough to drive a woman crazy, I think," said Evelyn, hopelessly, stooping to pick up a few of the scattered articles. "You were at the bureau last, Luke. It is your own fault!"

"My fault—of course it's my fault!" snarled Luke, giving Mrs. Darcy's poodle a kick that sent it howling to its mistress. "Anything but a woman's retorting and recriminating tongue. Mrs. Darcy, I won't endure it any longer!"

"Neither will I!" said Evelyn, resolutely advancing, as her husband plunged into the closet for his business coat, and promptly shutting and locking the door. "I think I have endured it quite long enough—and here is an end of it!"

"Mrs. Darcy, open the door!" said Luke, scarcely able to credit the evidence of his own senses.

"I shall do no such thing," said Mrs. Darcy, composedly, beginning to re-arrange shirts, stockings, and flannel wrappers in their appropriate receptacles.

"Mrs. Darcy," roared Luke, at a fever heat of impotent rage, "what on earth do you mean?"

"I mean to keep you in that clothes press, Mr. Darcy, until you have made up your mind to come out in a more amiable frame of mind."

There was a dead silence of fully sixty seconds in the closet, then a sudden outburst of vocal wrath.

"Mrs. Darcy, open the door this instant, madam!"

But Evelyn went on humming a saucy little air and arranging her clothes.

"Do you hear me?"

"Yes, I here you."

"Will you obey me?"

"Not until you have solemnly promised me to put some sort of control on that temper of yours, not until you pledge yourself hereafter to treat your wife as a lady should be treated; not as a menial."

"I won't."

"No? Then in that case I hope you don't find the atmosphere at all oppressive there."

Another sixty seconds of dead silence, then a sudden rain of heels and hands against the wooden pannels.

"Let me out, I say, Mrs. Darcy! Madam, how dare you perpetrate this monstrous piece of audacity?"

"My dear Luke, how strongly you do remind me of Freddy. You see their is nothing I have so little tolerance for as a bad temper. It ought to have been checked long ago, only you know I'm so ridiculously indulgent."

Mr. Darcy winced a little at the familiar sound of his own words.

Tap, tap, tap; came softly on the door. Mrs. Darcy composedly opened it and saw her husband's little office boy.

"Please, mam, there's some gentleman at the office in a great hurry to see Mr. Darcy. It's about the Applegate will case.

Mrs. Darcy hesitated an instant; there was a triumphant rustle in the closet, and her determination was taken.

"Tell the gentleman that your master has a bad headache, and won't be down town this morning."

Luke gnashed his teeth audibly, as soon as the closing of the door admonished him that he might do so with safety.

"Mrs. Darcy, do you presume to interfere with the transaction of business that is vitally important, ma'am?"

Mrs. Darcy nonchalantly took up the little opera air where she had left it, letting the soft Italian words ripple musically off her tongue.

"Evelyn, dear."

"What is it, Luke?" she asked mildly.

"Please let me out. My dear, this may be a joke to you, but—"

"I assure you, Luke, it's nothing of the kind; it is the soberest of serious matters to me. It is a question as to whether my future life shall be miserable or happy."

Their was a third brief interval of silence.

"Evelyn," said Luke, presently, in a subdued voice.—

"Will you open this door?"

"On one condition only."

"And what is that?"

"Ah! ah?" thought the little lieutenant general, "he's beginning to entertain terms of capitulation, is he? On conditions," she added aloud, "that you will break yourself of the habit of speaking sharply and crossly to me, and on all occasions keep your temper."

"My temper, indeed," sputtered Luke.

"Just your temper," returned his wife, sternly. "Will you promise?"

"Never, madam."

Mrs. Darcy took up a pair of hose that required mending, and prepared to leave the apartment. As the door creaked on its hinges, however, a voice came shrilly through the opposite keyhole.

"Mrs. Darcy, Evelyn, wife."

"Yes."

"You are not going down stairs to leave me in this place?"

"I am."

"Well, look here—I promise."

"All and everything I require."

"Yes, all and everything that you require—confound it all."

Wisely deaf to the muttered sequel, Mrs. Darcy opened the door, and Luke walked out, looking right over the top of her shining brown hair.

Suddenly a little detaining hand was laid on his coat sleeve.

"Luke, dear!"

"Well?"

"Won't you give me a kiss?"

And Mrs. Darcy burst out crying on her husband's shoulder.

"Well," ejaculated the puzzled Luke, "if you aren't the greatest enigma going. A kiss? Yes, a half a dozen of 'em if you want, you kind hearted little turnkey. Do not cry, pet, I'm not angry with you, although I suppose I ought to be."

"And may I let Freddy out?"

"Yes, on the same terms that papa was released. Evelyn, was I very intolerable?"

"If you hadn't been I never should have ventured on such a violent remedy."

"Did I make you very unhappy?"

"Very."

And the gush of warm sparkling tears supplied a dictionary full of words.

Luke Darcy buttoned up his overcoat, put on his hat, shouldered his umbrella, and went, to the Applegate will case, musing as he went upon the new state of affairs that had presented itself for his consideration.

"By Jove," he ejaculated, "that little wife of mine is a bold woman and a plucky one."

And thus he burst out laughing on the steps.

It is more than probable that he left his stock of bad temper in the law buildings that day, for Evelyn and Clara never saw any more of it, and Freddy is dally getting the best of the peppery element in his infantile disposition.

Deeds are fruits; words are but leaves; words and deeds are noble companions.

DOMESTIC RECIPES.

MINCMEAT.—Take a pound and a half of currants; a pound of the best raisins, stoned; three quarters of a pound of almonds, cut very small; the peel of one lemon, minced small; the juice of one lemon; three apples, minced small; a pound and a half of suit, shred very fine; an eighth of an ounce of nutmeg; the same of cinnamon, the same of mace, and the same of cloves. Put the whole into a jar, and keep it dry. When wanted, mix it with either wine or brandy.

BROWN RABBIT SOUP.—Cut into joints, flour and fry lightly two full grown rabbits, add to them three onions of moderate size, also fried brown; on these pour gradually seven pints of boiling water; throw in a large teaspoonful of salt, clear off the scum as it rises then put to the soup, small bunch of parsley, four carrots and a few peppercorns; boil the whole very softly for five hours, add more salt if needed; strain off the soup, let it cool sufficiently for the fat to be skimmed clean from it; heat it afresh and send to the table.

POTATO PUDDING.—With a pound and a quarter of fine mealy potatoes boiled very dry and mashed perfectly smooth while hot, mix three ounces of butter, five or six of sugar, five eggs, a few grains of salt and the grated rind of a lemon. Pour the mixture into a well-buttered dish and bake in a moderate oven three-quarters of an hour. When done sift some sugar on it.

SPONGE GINGERBREAD.—One cup sour milk, one half teaspoonsful of saleratus, one tablespoonful ginger; flour to make as poundcake; warm the butter, molasses and ginger, then add the milk, flour and saleratus, and bake as quickly as you can.

DELICIOUS DRESSING FOR ROAST FOWLS.—Spread pieces of stale but tender wheaten bread liberally with butter, and season rather high with salt and pepper, working them into the butter; then dip the bread in wine, and use it in as large pieces as is convenient to stuff the bird. The delicious flavor which the wine gives is very penetrating, and it gives the fowl a rich gamey character, which is very pleasant.

TO PREPARE TRIPE FOR THE TABLE.—Take a kettle of hot water, nearly boiling, put in a piece of salsoda the size of a walnut, cut your tripe in small pieces, put one piece in at a time, and let it remain about five minutes, or longer, until it will scrape off easy; clean, soak in salt and water two days, and scrape each morning. It will be ready for cooking.—Boil till well done.

TO REFINES SOAP.—Make a kettle of brine—one pint of common salt to two gallons of water. In five gallons of this brine boil 15 pounds of soap for two hours. When cold, cut in bars, scrape the sediment from the bottom of the bars, lay them on a shelf to drain well, exposed to the sun for bleaching for a good white.

WATER PROOF BLACKING.—Take one-quarter pound of tallow, one-quarter pound of beeswax, one-quarter pound of rosin, one pint of tanner's oil, and lampblack to color. This is an excellent blacking for the leather, and boots and shoes last one third longer by its use.

QUICK PUDDING.—Scald a quart of milk; take three table-spoonfuls of cold milk, three of flour and three eggs; rub well together, and pour the batter in while the milk is hot. Then bake half an hour. Butter and sugar beat to a cream for dressing, flavor with nutmeg.

WASHINGTON CAKE.—One cup of sugar, one cup of flour, two eggs, two table-spoonfuls of butter, one teaspoonful cream of tartar, and one-half teaspoonful soda. Bake in two tins and put jelly between—flavor with lemon.

ITEMS IN DOMESTIC ECONOMY.

CREAKING HINGES.—Doors hung on butt hinges often make an unpleasant noise by creaking. The best way to prevent it is to place a drop or two of kerosene, by means of a feather, on the top of the bolt connecting the two parts, as well as at the sides working the door backward and forward at the same time. The oil will run down and the difficulty will cease.

VENTILATION.—Those who occupy or work in close rooms often suffer in health for want of fresh air. Apartments not supplied with ventilators should have the windows so constructed as to let down one, two or three inches from the top. This will let in a moderate and steady current, which will become well mixed with the other air before it reaches the floor, and be more pleasant than sweeping gusts near the feet through windows raised from below.

LEVELING CLOCKS.—Clocks often run badly by not being set level—ticking unequally and topping easily. They may be wedged up so as to be perfectly level, and an accurate ear will know by the ticking when this is effected. But a more perfect way is to tack a card or paper behind the pendulum in the evening, and place a bright lamp at a distance exactly in front. Then mark with a pencil the shadow of the rod, move it very slowly to one side until it ticks, and then make another mark. Move it to the other side and mark it when it ticks again. Measuring the distance of these three marks will enable the operator to level the clock to a hair's breadth.

THERMOMETERS.—Every house should be supplied with several thermometers. Apples will keep better in a cellar with a low temperature, which may be maintained if one or two thermometers are always at hand to indicate the approach of freezing. They are always of use in dairy and other apartments.

MATCHES should always be kept in a match safe. It is neither neat nor secure to leave them scattered on bureaus and stands. Every good tin shop supplies the article, but if nothing better can be had, empty mustard boxes with smooth fitting lids will answer.

LAMP-LIGHTERS.—These may be easily made by tearing waste paper into strips an inch wide, and rolling these strips neatly, by beginning at the upper corner and rolling nearly but not quite parallel with the side of the strip. When completed, bend up and pinch the lower end, to prevent unrolling. A little practice will give them a very neat appearance. If desired, they may be made long enough to run the chimney of a kerosene lamp.

BASKETS should never have any wet substance placed in them, such as apple parings, or anything

that will wet and decay the splints and spoil their appearance.

WASTE TWINE should be neatly wound into balls and kept for future use, and not thrown into draws in a tangled mass. This will save time when one is in a hurry, and impart habits of neatness.

PASTE FOR READY USE.—Mucilage made of gum arabic is good for many purposes, but rather costly. A cheap kind, and better adapted for pasting un-sized paper, is made of gum tragacanth. A few cents worth may be procured at a druggist, and will last years. Place a stratum of the gum half an inch thick in the bottom of the bottle and fill it two-thirds with rain water. In a few hours it will be ready for use, and will last several weeks in hot weather without injury.

TABLES without castors should always be carefully lifted from one place to another. Nothing destroys a table more rapidly than shoving it on its legs across the floor.

PAINT.—It is always convenient to have paint at hand for doing small jobs. If kept in common paint pots, it soon dries. An empty fruit jar with a close fitting cork answers an excellent purpose; and if the handle of the brush is short, so as to go inside, it is always ready without washing. Putty always ready for use may be kept in the same way.
—*Exchange.*

MARRIAGE AND RESPONSIBILITY.

Marriage is a solemn thing. We do not speak from experience, but from witnessing the ceremony when friends of ours were paraded like victims before the altar. The thought of marriage has a demoralizing effect upon nervous temperaments.—There is a responsibility attached to the holy vows made before God and man which promotes a feeling of uneasiness when the future is taken into consideration. A marriage ceremony may be solemn, but it is not graceful. One can only be graceful when he or she is self-possessed. When an individual becomes nervous he loses control over himself; nervousness leads to embarrassment, and embarrassment makes an awkward gawk out of the most polished of men. We officiated as a groomsman once, and by the time we had marched down the aisle of the church we were so completely bewildered and all-a-joint, as it were, that when we reached the altar we scarcely knew whether we were standing on our head or feet. The ceremony required us to kneel, and the row went down like raw recruits keeping step when marching, or trying to march, under the critical eye of a drill-master for the first time. We regained our feet in the same beautiful order. The reader, perhaps, has observed young turkeys when frightened. They rush pell-mell and crouch in the grass; presently, one bolder than the

rest, lifts his head, and finding the coast clear, proclaims the cheerful intelligence; then the heads pop up one by one, and pride, composure and lofty bearing are regained. With us, the groomsman on the extreme flank, whispered to his neighbor to get up, and neighbor rose whispering to neighbor until the line was erect again, dignified and solemn as the grand old trees of a forest. We have witnessed many marriage ceremonies since that time, and truth, if not modesty, compels us to say that we never saw an undrilled squad perform with more grace and composure than the one in which we officiated. If the thought of marriage is such a bewildering one to bridesmaids and groomsman, what must it be to the central figures of the group. Certainly, a modest man may be excused for shrinking from such a terrible ordeal; and we feel justified in extending sympathy whenever victims are paraded before the altar in our presence. According to newspaper report a young man in Portland, Maine, recently committed suicide by shooting himself the night before the one set for his wedding. As an explanation of his strange act, he left a letter stating that he could not muster up the courage necessary to assume the responsibilities of a married man, so he quietly shot himself. Here is a martyr for you. The thought of the future appalled him. He had the courage to die, but not to lightly take the solemn vows to watch over his lawful bride in "sickness and in health." He was too conscientious to make a good husband. Men of conscience and tender feeling are timid about asserting their authority, and their wives are pretty sure to lead them by the nose. The word "obey" is quietly canceled, and life, overlooking the "squalls," passes as a radiant Summer dream. The husband is left at home to take care of his "responsibility," or "responsibilities," as the case may be, while the wife is absorbed in a round of folly and dissipation, a gay women of the world. The future responsibilities of the married state, we insist, are awful, and we can truly sympathize with the poor sensitive fellow at Portland, who eagerly embraced death as an escape from them. The only mystery about the case is, how the poor suicide mustered sufficient courage to declare himself. Some one may suggest that the woman proposed matrimony herself, thus overcoming native modesty. Well, there may be truth in the suggestion, but we are not going to subscribe to it, because we do not wish to be accused of slandering the sex. We are well aware that some men are so eager to commit matrimony that they are perfectly miserable when disappointed, deliberately shoot themselves as the speediest method of getting out of misery. What absurdity! The nonsensical talk about love will do for cooing doves, and rash, impetuous fools, but

not for those who preach philosophy and prove their faith in it by practicing what they preach.—To be frank, we do not believe in a man's shooting himself under any consideration. It is a cowardly feeling that shrinks from responsibilities in this world. We grant that we are inconsistent, but claim that consistency is one of the exploded dogmas of the age. Show us a perfectly consistent man and we will show you a man of one idea, without character and without influence as the world goes, eternally revolving around one monotonous circle.—*Turf, Field and Farm.*

MOORE'S RURAL NEW YORKER.—This magnificent agricultural and literary weekly commences its 21st volume in January. It is so well known to our people that it needs no recommendation from us.—It is the largest and best paper of its kind in this or any other country. It is conducted by D. D. T. Moore, Esq., assisted by an able corps of associates and contributors. Its motto is "progress and improvement." Terms \$3 per annum. Office, 41 Park Row, New York.

We will furnish the *Rural New Yorker* and the *Maryland Farmer* one year for \$3.50.

RECEIVED.

Hitchcock's New Monthly Magazine, containing choice Music, art notes, and select reading for the family circle. This magazine is gotten up in the very best style of art, and its literature is unexceptionable. The November number contains four pieces of choice music, portraits of Carlotti Patti and Madame Caradori Allan, two great musical celebrities. Published by B. W. Hitchcock, New York, at \$3 per annum, and is really worth it.

The Musical Independent will commence its second year this month. The volume just ended, contains 11 songs, 14 songs with choruses, 4 duets and quartettes, 3 anthems, 53 pieces for piano solo, and 8 for reed organ—total 63 pieces of music, worth over \$30, together with interesting reading matter, and all this for \$2. If we were musical we would not do without this elegant *Independent*. Published by Lyon & Healy, Chicago, at \$2 a year, single copies 25 cents.

THE GALAXY.—The publishers of this popular and standard monthly which is one of the best in the country, offers a brilliant programme for 1870. The editorial departments of *THE GALAXY* will be maintained and extended. The editorial force will be large, and include some of the best talent in American periodical literature: the chief editors being the Messrs. Church, who are assisted by Richard Grant White, Justin McCarthy, George E. Pond, S. S. Conant, J. F. Melville and others. A new feature will be a comprehensive monthly review of the literature of the world, which must be of the highest value to all intelligent readers.

Among *THE GALAXY's* list of contributors are nearly all the most famous of American, besides many of the most popular of European, writers. This magazine evidently proposes to make the campaign of 1870 a vigorous and successful one. Published by Sheldon & Co., New York, at \$4 per annum.

AMERICAN HORTICULTURAL ANNUAL FOR 1870.—A year-book for every home. The fourth number of this beautiful serial is now ready. It contains a popular record of horticultural progress during the past year, with other valuable articles, many of which are illustrated with elegant engravings. Orange Judd & Co., New York. Price—paper 50 cents; cloth 75 cents.

THE OLD FRANKLIN ALMANAC FOR 1870 is just issued, and contains much useful information. Published by A. Winch, Philadelphia. Price 20 cents.

BRAINARDS' MUSICAL WORLD filled with beautiful new music and interesting reading. Each number contains twenty pages of new music and valuable reading. Send ten cents to the publishers, S. Brainard & Sons, Cleveland, O., and you will receive specimen copy. Price per annum \$1.

FARMER AND ARTISAN.—The first number of this weekly journal of Southern industry is received, and promises to be a valuable auxiliary to the farmer and artisan. It is published and edited by M. C. Fulton & Co., Athens and Atlanta, Ga. \$3 per annum.

BALTIMORE CHRISTIAN ADVOCATE.—The first number of this weekly journal was issued January 1st, and published in the interest of the Methodist Church South. Edited by Dr. Thos. E. Bond and R. A. Holland, Baltimore. Price \$4 per annum.

THE AMERICAN AGRICULTURAL ANNUAL.—This annual for 1870 should be in the hands of every farmer. It is the farmer's yearbook, exhibiting recent progress in agricultural theory and practice, and a guide to present and future labors. Numerously illustrated. Orange Judd & Co., New York. Price—paper cover 50 cents; cloth 75 cents.

The Southern Orphan.

The Orphan is the organ of the "Dunbar Female Institute," a flourishing school for young ladies, located in the city of Winchester, Va., and under the control of the Rev. JAMES B. AVIRETT, of the Episcopal Church. The profits derived from its sale are to be appropriated exclusively to the Southern Educational Fund, which it has already aided by a handsome donation. Its aim is to benefit the fund for the education of the children of Southern soldiers who died while defending the "Lost Cause." This object alone should commend it to the patronage of the Southern people—saying nothing of its efforts to establish an exalted standard for the education of youth, and its moral tone.

Anxious to do everything in his power to promote the interest of the Orphan Children of our heroic dead, the Principal proposes to submit the accounts of the Periodical to the auditorship of the following gentlemen:—Hon. Henry A. Wise, Va.; Hon. Z. B. Vance, N. C.; Hon. Stevenson Archer, Md.; Hon. D. K. McRae, Tenn.; Hon. Benj. Hill, Ga.; N. H. R. Dawson, Esq., Ala.; Col. George Gardner, La.; or some one person whom they may select for convenience, and to devote the entire proceeds, after deducting the necessary expenses, to the Treasurer of the Southern Educational Association of Baltimore, Md. We commend the *Orphan* to the patronage of our southern friend, and suggest they should send \$2 to Rev. James B. AVIRETT, Winchester, Va., for one year's subscription.

THE PENNSYLVANIA FRUIT GROWERS' SOCIETY.—The annual meeting of this association will convene in the Orphans' Court Room, Lancaster, Pa., Jan. 19th, 1870, at 2 o'clock, P. M. As this will be the decennial anniversary of the society, and held in the city of its organization, a profitable session may be anticipated. Every one interested in the production of good fruit should be present and assist the Society in its deliberations. Specimens of fruit are particularly requested for exhibition. Essays will be read by Wm. Saunders, of Agricultural Department at Washington, D. C., and by Prof. S. S. Rathvon, on the "Insect enemies of the Grape." An address will be delivered by Thomas Meehan, editor of *Gardener's Monthly*. Josiah Hoopes, President; Thomas Meehan, Secretary.

NEW YORK WEEKLY TRIBUNE.—We call attention to the advertisement of the *Weekly Tribune* in this number. In addition to its politics and general summary of news, it contains weekly much valuable agricultural and horticultural information, and a veterinary department under the direction of Prof. James Law, veterinary surgeon in Cornell University. Address as above. Terms \$2 per annum.

CHESTER WHITE SWINE AND PURE BRED POULTRY.—Thos. B. Smith & Co., Plantsville, Connecticut, offers for sale pure Swine and Poultry. Send for Illustrated Catalogue.

Address R. V. Pierce, M. D., 395 Main street, Buffalo, N. Y., and get Dr. Sage's pamphlet on Catarrh, free, or send sixty cents and get Dr. Sage's Catarrh Remedy. \$500 reward is offered by the proprietor for a case of Catarrh which he cannot cure. Sold by druggists. Cut this out as you may never see it again.

Dr. Pierce's Alt. Ext., or Golden Medical Discovery cures severe coughs.